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Economic Integration in the Production of Table Eggs With Applications Tothe Southeastern United States.

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ECONOMIC INTEGRATION IN THE PRODUCTION OF TABLE EGGS WITH APPLICATIONS TO THE SOUTHEASTERN UNITED STATES

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ABSTRACT

There has been a rapid increase in economic integration in the table egg industry during the past decade. Development and growth of integrated operations can be traced to such factors as: (1) lack of coordination between the producing and marketing firms in maintaining a uniform supply of high quality eggs throughout the year, (2) firms attempting to develop a larger volume, and gain some control over supply, and (3) expectations of larger profits.

The purpose of this study is to analyze the conditions responsible for growth of economic integration, appraise the contracts that are being used, and develop a model contract that can be used as a guide by the table egg industry.

Case studies were used in this work, as they reveal the complete operation, thus giving a better overall picture of the firm than would be possible using the statistical method, which often fails to adequately view the complexity of the business.

Integration is defined as bringing parts into a whole. Economic integration has taken two forms: (1) quasi, and (2) complete. Quasi-integration refers to integration through contract and/or agreement and complete integration refers to integration through ownership.

In this study, complete and quasi-integration are subdivided into three categories: (1) horizontal, (2) vertical, and (3) circular. Horizontal integration refers to a firm that either owns or controls a number of units on the same level of the production process. Vertical integration refers to a firm that either owns or controls one unit on two or more levels of the production process. Circular integration refers to

a firm that either owns or controls a number of units on two or more levels of the production process. A non-integrated firm is defined as a profit maximizing entity which carries on a single operation in a single unit without contract or agreement to enter into other operations, and is used in this study as a benchmark in discussing complete and quasi-integration.

A model table egg contract was developed in this study taking into consideration the contribution and risks of the dealer and producer. A schedule of payments was also developed as a basis on which a dealer could determine an equitable payment plan and as a guide for table egg producers in deciding whether a particular contract was fair.

Complete integration, where farm feed mixing is one segment, usually makes possible a lower cost of producing a dozen eggs than is possible under quasi-integration or non-integration. Based on this study, complete economic integration is recommended for the firm that has sufficient capital and know-how to operate a table egg enterprise. Quasi-integration is recommended for producers with limited capital and whose credit position is weak, when egg prices appear to be entering a depressed period, or for a new producer.

The trend in Georgia and the Southeast, from a long range standpoint is for more, not less, economic integration in the table egg industry.

INTRODUCTION

Economic integration in the table egg industry is not new. For many years, some farmers have sold their eggs directly to food stores and/or consumers, thus combining the function of producing and marketing. However, the dominant pattern of egg marketing during the last decade has been sales by producers to country point buyers who sell in turn to other country point buyers or to city market wholesalers.[1]

Economic integration in the table egg industry has been subject to considerable fluctuations in recent years. This type of organization has been developing in Georgia and the South since 1950, but numbers and size of firms changed very little during the first few years of this period. A phenomenal increase has taken place in recent years. In 1959 one-third of the table eggs produced in Georgia were under some type of contract plan. It is estimated that another one-third was produced under some other form of economic integration.[2]

The development and growth of integrated operations may be traced to certain factors that have been inherent in the table egg industry. Problems associated with the lack of coordination between producing and marketing firms in obtaining a uniform supply of high quality eggs throughout the year, has been a major factor leading to integrated egg programs.

Feed companies and feed dealers have begun integrated programs primarily to maintain or increase their feed tonnage. Some small feed dealers,

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[1]Ralph L. Baker, Integrating Egg Production and Marketing, United States Department of Agriculture, Agricultural Marketing Service, Marketing Research Report No. 332, June 1959, p. 7.

[2]Harold B. Jones, Expansion of Contract Egg Operations in Georgia, United States Department of Agriculture, Agricultural Marketing Service, Marketing Economics Research Division, Mimeograph Series N.S. 87, January 1960, p. 1.

seeing the larger feed mills getting most of the contract feed business, have formed loosely-knit production and marketing organizations so they can compete in these areas. The small feed dealers are usually independent operators from the production standpoint but may market eggs on a coordinated basis with other firms.

Poultrymen who have integrated claim they did so because of cost and returns advantages from controlling more than one facet in producing and marketing table eggs.

Internal economies of scale are allowing large egg producers to introduce internal operations which tend to reduce unit costs and encourage expansion. Some poultrymen are becoming sufficiently large to justify increased specialization within their organization.

Overall Purpose of Study

It is anticipated that this study will foster a better understanding and coordination in decision-making among egg producers, marketing firms, feed companies, feed dealers, hatcheries and financial institutions.

General Objectives

The objectives in this study are: (1) to develop a theoretical framework for determining the nature and extent of integration patterns in the table egg industry, (2) to examine the present organization of business units involved in table egg production, (3) to identify the integration patterns within the industry, (4) to analyze conditions responsible for the growth of economic integration, (5) to study differences in producer costs between the various forms of integration, (6) to appraise

the contracts that are being used, and (7) to develop a model contract for use as a guide, in the table egg industry.

Method and Scope of Study

The market egg industry in Georgia has expanded rapidly in recent years. The average number of hens and pullets on farms January 1 has increased from 6.9 million in 1951 to 9.6 million in 1960 (Table I). These figures include the 30 to 40 percent kept for broiler hatching egg purposes.[3]

Almost all of the increase in table egg production in Georgia has been through economic integration. Integration in agriculture has progressed at a rapid rate as relatively few firms become dominant in certain agricultural products with the result that oligopolistic-oligopsonistic market structures are created. Nicholls stated that he feared oligopsonistic elements in local country-buying agencies as much as he did those of larger national processors or wholesale distributors.[4]

The table egg industry may be characterized as being in the "increasing returns to scale" phase. According to Due's definition, increasing returns to scale is where a given percentage increase in inputs will lead to a greater relative percentage increase in output.[5]

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[3]Personal interviews with R. A. Gayvert, Poultry Marketing Specialist, Cooperative Extension Service, University of Georgia, Athens, Georgia

[4]W. H. Nicholls, Imperfect Competition Within Agricultural Industries, (Ames, Iowa: Iowa State College Press, 1946), pp. 153-154.

[5]John F. Due, Intermediate Economic Analysis (Homewood, Illinois: Richard D. Irwin, Inc., 1956), p.140.

Table I

Hens and Pullets on Hand January 1
State of Georgia and United States - 1951-1960

	Millions	
	Georgia	United States
1951	6.9	410.2
1952	7.1	419.9
1953	6.9	405.6
1954	7.1	413.6
1955	7.9	368.6
1956	7.6	360.2
1957	8.1	368.8
1958	8.5	352.5
1959	9.3	363.7
1960	9.6	349.4

Source: Farm Production, Disposition and Gross Income from Chickens and Eggs, AMS - USDA

Table II

Egg Production Per Layer
State of Georgia and United States - 1951-1960

	Georgia Number	United States Number
1951	144	177
1952	148	181
1953	154	182
1954	178	188
1955	192	192
1956	196	196
1957	197	198
1958	199	201
1959	206	207
1960	208	209

Source: Handbook of Poultry and Egg Statistics
Farm Production, Disposition and Gross Income From Chicks and Eggs. AMS - USDA

Increasing returns to scale can be attributed primarily to two considerations: (1) the indivisibility of some factors, and (2) the advantages of specialization. The inability to divide certain factors of production into smaller units results in a relatively low output per unit when the enterprise is small.

The primary advantages of specialization include the greater skill acquired with specialization, avoidance of wasted time in shifting from one task to another, and the employment of persons best suited to the particular types of work.[6]

Technological advances in producing table eggs, such as better stock, better management practices, improved nutrition, and more adequate disease control have also contributed to lower production costs. In the decade between 1950 and 1960 egg production per layer in Georgia increased 64 eggs (Table II).

Procedures for the Study

Case studies were used in this work as they reveal the entire unit, thus giving a more complete record of what occurs within a firm. In addition, statistics were used where applicable. The interaction and sequential gaps within a unit are closed in a case study, and to the extent these facts are relevant, to that extent a case study has the quality of testing relations where they have real meaning.

It is rare that analysis of a single case will suffice for a full

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[6] Ibid., p. 142.

inquiry. There must be as many cases as there are combinations of strategic "means - ends" factors for a complete analysis. This number is required so there will be enough separately distinquished combinations to reveal the processes of the various possible "means - ends" events. A larger number would be useful as checks on the adequacy of the determination of elements as strategic, complementary, or irrelevant.

Marshall stated that the case study at its best is the best of all, but in ordinary hands it is likely to suggest more untrustworthy general conclusions than those obtained by the statistical method.[7]

In this work seven case studies were made so that a complete picture could be ascertained of the economic integration patterns in the table egg industry. These case studies include (1) non-integration, (2) quasi-horizontal integration, (3) quasi-vertical integration, (4) quasi-circular integration, (5) complete horizontal integration, (6) complete vertical integration, and (7) complete circular integration.

Review of Literature

In 1959, Jones reported that in Georgia about one-third of the commercial layers were under contract. He further stated that development and growth of contract operations can be traced to the lack of coordination in producing and marketing operations necessary to obtain adequate volumes of high quality eggs and seasonal stability in outputs of specific grades and sizes of eggs.[8]

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[7]Alfred Marshall, Principles of Economics (Eighth Edition; London: Macmillan and Company, 1938), p. 116.

[8]Jones, op. cit., pp. 1-2.

Baker made the following comments about integrating egg production and marketing. Open market pricing of eggs has failed to solve many problems of quality-control and seasonal distribution of production. Conventional producing and distribution methods also result in higher costs of production and marketing than appear likely with more highly integrated operations.

Market operators, feed companies, and producers developed contract production, contract marketing and quality-control, and owner-integrated programs to help solve quality, supply, and cost problems. Contract marketing and quality-control programs accounted for approximately 10 percent of the nation's eggs in 1958, and contract production programs accounted for less than 5 percent during this same period. Contract marketing and quality-control programs are expected to continue to expand, particularly in the Northeast, Midwest, and Far West and contract production will likely increase in the South and other relatively low income areas. Costs of production and marketing will decrease because well-coordinated programs will result in shorter market channels which will decrease overhead selling and other transfer costs. Large owner-integrated concerns have closer control over their operations than either contract marketing and quality-control or contract production programs and can minimize overhead selling, and other multiunit costs.[9]

Kohls reports that the location of "decision centers" will change when integration of agricultural production is accomplished through a system of contractual management. The routine decisions will remain as near the activity as possible while strategic non-repeating decisions are

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[9]Baker, op. cit., pp. 1-2

moved to the top level management group. The use of the best analysis and experience available for strategic decisions is necessary because of external and internal relationships.

Kohls further stated that integration in agriculture, through contractual arrangements, removes us from our relatively safe small firm production economies and traditional marketing and price analysis and tosses us into the wild and turbulent sea of imperfect competition. The gap between the economies of agriculture and non-agriculture is thus narrowed one more step.[10]

Jasper feels that integration is forcing good business managers into agriculture. He also emphasized that no area is likely to find a natural protective barrier by virtue of its location that will shelter its poultry industry.[11]

Roy distinguishes between loose and tight contracting by stating that a loose contract is where feed, pullets and medications are supplied on a credit basis with some management assistance from the supplier and a tight contract is where eggs are produced on a fee basis.[12]

Driggers emphasized that in egg contracting the grower does not lose his independence. He is given employment in a business located on his own farm in a dignified profession.[13]

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[10]R. L. Kohls, "Decision-Making in Integrated Production and Marketing Systems," Journal of Farm Economics, XL, No. 5 (1958), 1801-1811.

[11]A. William Jasper, "Vertical Integration in the Egg Industry." Feedstuffs, XXIX, No. 20, (1957), 42-50.

[12]Paul Roy, "Which Way Will Contracting Go?" Poultry Tribune, LXV, No. 11 (1959), 14.

[13]J. Clyde Driggers, "Will Southern Eggs Be Produced Under Contract?" Poultry Tribune, LXV, No. 11 (1959), 40.

Changing technology in agriculture has had a great impact on production, processing, marketing, financing, risk sharing and efficiency of operation according to Bailey and Engberg.[14] They reported that cooperatives are giving help to farmers by bringing together and performing economic functions under centralized control.

A report by the United States Department of Agriculture states that agriculture is struggling to adjust to the technical revolution taking place on farms and in market places. The most important type of adjustment, aimed at better coordinating the functions of farm and farm industry, is contract farming. As farmers pass on to others the responsibility of decision making, they frequently pass along extra income that results from good decisions and management. Through cooperative organizations, farmers can share risk and management decisions and yet extend the range of decisions for which they have responsibility. They can retain a larger share of the benefits of joint action.[15]

A study of the Central Carolina Farmers Exchange, Inc., Durham, N. C. by Abrahamsen and Engberg shows that the cooperative is performing a number of integrated services for its patrons. This association, through

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[14]John M. Bailey and Russell C. Engberg, A Study in Economic Integration, United States Department of Agriculture, Farmer Cooperative Service, General Report 45, June 1958, pp. 1-13.

[15]United States Department of Agriculture, Contract Farming and Vertical Integration in Agriculture, Agriculture Information Bulletin No. 198, July 1958, pp. 1-21.

an aggressive program of director, employee, and member education, is striving to adjust its operations to the far reaching implications of integration.[16]

Seaver stated that considerable attention in contract farming should be directed toward the market control aspects of integration so that serious economic exploitation does not result.[17]

Butz says there is much good in integration. With proper direction, it will result in increased production, efficient distribution, controlled quality, uniform supply, stable prices, and increased incomes to producers. The fact that an individual producer may surrender some of his managerial freedom is a small price to pay for the advantages inherent in an integrated system.[18]

Sources of Data

Sources of data include: (1) economics and poultry science journals, texts, and theses bearing on firm integration, (2) agency information from the United States Department of Agriculture, (3) research reports of various agricultural experiment stations, poultry departments and divisions of agricultural economics, (4) case studies, and (5) articles in the popular poultry press. These and other sources of information are acknowledged in footnotes at the appropriate places.

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[16]Martin A. Abrahamsen and Russell C. Engberg, Integrated and Related Operations of the Central Carolina Farmers Exchange, United States Department of Agriculture, Farmer Cooperative Service, General Report 44, June 1958, pp. 1-24.

[17]Stanley K. Seaver, "An Appraisal of Vertical Integration in the Broiler Industry." Journal of Farm Economics, XXXIX, No. 5 (1957), 1487-1497.

[18]Earl L. Butz, "Don't Be Afraid of Integration," Better Farming Methods, XXXI, No. 5 (1959), 43-45.

ECONOMIC FRAMEWORK IN RELATION TO TABLE EGG PRODUCTION

Economic theory recognizes four general market structures: (1) pure competition, (2) monopolistic competition, (3) oligopoly, and (4) monopoly. These market structures differ from one another primarily on the basis of how much influence individual buyers and sellers have on price. The extent to which individuals influence price depends primarily upon (1) homogeneity of the product, (2) number of buyers and sellers, and (3) extent of co-operative action or interdependence among the buyers and sellers.

Pure Competition

Pure competition is used in this study rather than perfect competition, in that it more nearly approaches the conditions prevalent in non-integrated table egg enterprises.[1] The rigid stipulations of perfect competition - perfect knowledge, perfect mobility, infinite number of buyers and sellers, and a homogeneous product - are relaxed to a limited extent.

Under pure competition, the commodity produced must be relatively simple and homogeneous, so that buyers regard the products of all sellers as identical and have no preferences for dealing with any particular firms. The number of buyers and sellers must be sufficiently large, and the volume of business handled by each sufficiently small, that changes in sales or purchases by any one firm will not perceptibly affect the price. This

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[1]John F. Due, Intermediate Economic Analysis, (Homewood, Illinois: Richard D. Irwin, Inc., 1956), pp. 188-218.

latter condition will be fulfilled only if the average cost of production in all firms reaches a minimum at a relatively low output. It will, also, be fulfilled only if the commodity is readily transportable and if the firms (buyers and sellers) are close together.

Three market periods are generally recognized in economic literature: (1) market period, (2) short-run period, and (3) long-run period. The equilibrium market price is at the level where the quantity demanded and quantity supplied are equal. Price during the market period depends upon the interaction of supply and demand from an existing stock of goods.

Over the short-run period, firms are able to adjust output from existing plants and the price will tend to move toward the short-run equilibrium level. The ability of firms to adjust output introduces a new determinant of supply -- the costs of production. In the short-run the firm will not produce unless the price received for goods covers average variable costs, except when the owners are certain prices will rise in the near future. Variable costs are those which cease when production is suspended.

The long-run equilibrium price level is determined by the relationships between demand and long-run supply. The long-run supply period provides sufficient time to allow (1) completion of all desired adjustments in factor units, (2) entry of new firms, and (3) departure of old firms. In the long-run period the price received for goods must cover the average variable costs, but all costs are variable in the long-run.

The optimum output level in pure competition is always at the level where marginal cost equals marginal revenue, if profits are to be maximized.

A firm under pure competition may purchase its inputs from any firm and pays only the "going price." It proportionalizes its inputs to maximize profits. A pure market exists for a firm when it can buy as much as it wants at a given price but can purchase nothing at a lower price. When lower or higher prices are paid it is because of imperfect knowledge which is contrary to our definition of pure competition. Other departures from pure competition could result from: (1) differentiation of products, (2) locational differentiation, (3) advertising, and (4) integration arrangements.

Monopolistic Competition

Monopolistic competition is characterized by: (1) a substantial number of firms so that the policy of one firm does not appreciably affect the policy of another firm producing a similar product, (2) a situation where the products of various firms are differentiated, and (3) unrestricted entry of firms. The purchasers do not regard the products of the various firms as identical, but have definite preferences for particular products. In other words, the product of any one firm is not a perfect substitute for the product of any other firm.

It is likely that in most cases the differentiation will not be strong enough to give a high degree of inelasticity to the sales schedule, and the discretion which the firm has in the setting of prices will be relatively limited.[2] A relatively large increase in price above the optimum price level would cause a substantial loss in sales and a substantial decrease in price would cause a tremendous increase in sales.

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[2] Ibid., p. 142.

The setting of price involves a simultaneous determination of the volume of output. Price and output decisions cannot be made independently of each other, since the optimum price figure is dependent upon the volume of sales that can be made. At the price actually set a limited amount can be sold, whereas in pure competition a firm can sell an unlimited quantity at a particular price.

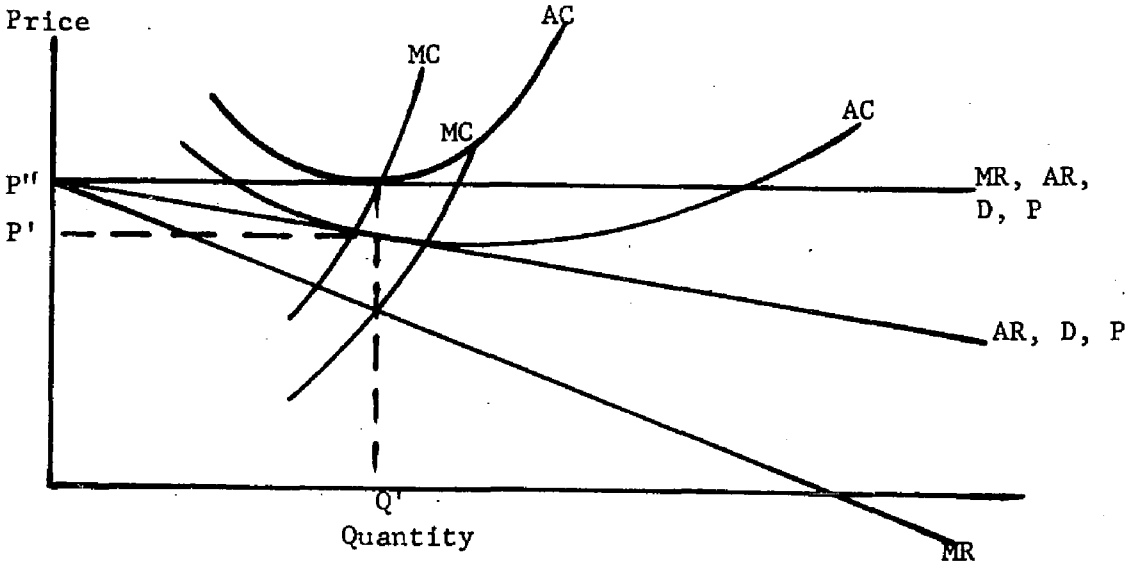
In all nonpurely competitive market structures the demand schedule for the product of the firm is less than perfectly elastic, and marginal revenue is less than average revenue (price). Each successive unit sold adds less to total revenue than the price received for it, as the price obtained on the previous units must be reduced to sell the additional unit. Firms in nonpurely competitive markets operate at the level of output where marginal revenue equals marginal cost, if profits are to be maximized -- the same as firms in purely competitive markets.

In monopolistic competition the excess of price over marginal cost is relatively slight, compared to cases of oligopoly and monopoly because of the high elasticity of the demand schedule. In the long-run, if entry is sufficiently free, all excess profits are eliminated and average revenue will equal average cost for each firm. The average revenue curves will be tangent to the average cost curves. Because of the sloping nature of the average revenue curve, the point of tangency will not be at the lowest level of average cost.

Excessive entry of monopolistic competitors may waste resources without giving the consumer the benefit of lower prices. Monopolistic pricing above true marginal costs bring distortion of resource allocation even if the firms involved have their excess profits diminished or eliminated.

Under monopolistic competition almost all firms could lower average cost of their output if they had a larger volume of sales. These firms usually do not attempt to secure this increased volume of sales, even though costs would be lower, because of the loss of net revenue involved in increasing volume. This loss in net revenue may be due to lower prices for the goods produced and to increased selling cost. This loss would not be present under pure competition. Monopolistic competition enables firms to maximize profits at a level of output which is inefficient in terms of costs.

This does not always signify that costs of production are lower in purely competitive markets, even though the point of tangency of the average revenue curve and the average cost curve is at the lowest level of average cost. This is shown graphically by combining the pure and non-pure market structures in the same diagram.



Under pure competition marginal revenue (MR), average revenue (AR), price (P), and demand (D) are identical as the demand for the product of the firm is perfectly elastic. Under nonpure competition average revenue, price, and demand are the same, but marginal revenue is less as demand for the product of the firm is less than perfectly elastic. Firms under

pure and nonpure competition adjust output to the level at which marginal revenue equals marginal cost (MC), if profits are to be maximized. The same level of output can theoretically be produced at less cost in a nonpurely competitive market than in a purely competitive market.

Oligopoly

Oligopolistic competition is a situation where the sellers in a particular market are sufficiently small in number so that their actions are mutually interdependent. Each firm shapes its policy in terms of the policies of its competitors. The products of the firms may be homogeneous or differentiated.

Oligopoly is designated as complete when joint profits of the firm are maximized and partial when joint profits are not maximized. Maximization of joint profits requires the determination of price on the basis of the total demand for product and the summation of the marginal cost curves of the firms.

It is difficult to maximize joint profits as many firms are unwilling to surrender their freedom of action and the desire to increase their share of the market and thus increase profits. It is, also, difficult to estimate the total demand curve, agree on product changes, advertising, and introduction of new techniques. A firm may make strategical moves to improve its position relative to that of his competitors. Entry is restricted, but new firms may attempt to enter the industry if profits seem higher than for other types of output. Technological requirement of a large volume for low cost operation is a major obstacle to the entry of new firms.

There is a sharp kink in the demand curve at the level of existing price. At the point of the kink, the marginal revenue and total revenue curves have a discontinuous section. The kink arises because of the greater tendency for competitors to follow price reductions than price increases. It is obvious to the firm that any other price would be unprofitable, since price increases would cause substantial losses in sales while price reductions would gain little additional business.

Average cost pricing is very prevalent under an oligopolistic market structure. The firm attempts to determine the average cost of the goods, including a normal profit, and sets the price on this basis. The percentage added may be one the firm knows will work or one which a competitor is using. There is a tendency for firms to move price up together when they have a reason or excuse.

Monopoly

Monopoly is the market structure where a particular product is sold by only one firm in a market. Since there are substitutes of a general nature (the demand curve for the product is not completely inelastic) even a monopolist is not free from the effects of the actions of other producers unless he has the power to coerce the buyers. A firm attains the position of a monopolist by absorbing or creating all units in the production of a certain good.

If a monopolist maximizes profits, he adjusts output to the level where marginal cost equals marginal revenue, and charges the price at which that quantity can be sold. The monopolist cannot lose business to other firms by increasing prices, nor can he gain from them by lowering

prices, as he is the only producer of the product. The demand schedule for the product of the firm is the same as the total demand for the product.

As long as the firm remains in a monopoly situation the long-run price and output changes involve only adjustments necessary to keep long-run marginal cost equal to marginal revenue. Monopoly does not guarantee excess profits. If demand for the product is adequate a complete absence of competition is of no benefit to the seller. The more inelastic the demand, the less likely will resources be utilized efficiently.

Advantages and Disadvantages of Integration

No attempt is made to classify the advantages and disadvantages of integration into horizontal, vertical and circular types.

There are, primarily, two overall advantages of integration for the integrating firms: (1) economies of scale and (2) control over price.

1. Integration may lower marketing expenses by reducing successive buying and selling costs, reducing risk through a steady supply of commodities, and lowering transportation expenses. Cost economies occur whenever an operator finds that a larger scale of operation makes possible a more efficient use of his managerial ability or better utilizes the under-used capacity of certain factors of production. Similar economies result when expanded production permits job specialization, work simplification techniques, increased use of labor saving machinery and the purchase of materials and supplies on a bulk basis. In addition to these internal economies of scale, certain benefits are derived from external economies. There can be improved processing and marketing, a

better bargaining position, as well as the development of stable and dependable sources of supply.

2. Purely competitive firms cannot exert any influence on prices, therefore some firms may integrate to improve their economic position. This is accomplished by such methods as controlling a larger part of the supply, producing a differentiated product and restricting entry of firms.

One major disadvantage of integration is that integrated units may run into diseconomies of scale because of such items as difficulties in managing different kinds of operations, lack of flexibility, handling too many commodities, delegation of managerial responsibility to individuals of less ability than the owner, and impersonal dealings with employees. One important cause of business failures is the attempt by a firm to operate another firm producing a completely different commodity. Large integrated firms may have greater difficulty meeting changed conditions than smaller but more specialized businesses. Costs of operation may be difficult to determine for various areas in the production process and thus inefficiencies may escape detection. Probably more economic efficiencies can be attained under vertical integration but horizontal integration is quite important in attempting to eliminate competitors.

The second disadvantage may affect the consumer by increasing price of goods. The extent to which firms can control price depends primarily upon the elasticity of demand for their commodities. The fact that horizontal integration may be attempted so a firm can raise prices may make the consuming public suspicious. The public may be wise to encourage vertical integration but to discourage consolidation of similar concerns except mergers of firms that are too small to secure the benefits of large-scale production.

Integration Patterns in Table Egg Industry

Three basic forms of firm integration are recognized in economic literature: horizontal, vertical and circular. Horizontal integration refers to a number of similar business units brought together under a common management, such as a number of table egg farms being owned or controlled by a single firm. Vertical integration is when a firm owns or controls one unit on more than one stage of the production process from the raw materials to the marketing of the finished product, such as the addition of a feed mill to a table egg operation. Circular integration is either (1) the adding of products to the specialized line which the firm sells in order to effect operating economies, such as an egg processing plant marketing egg nog in order to utilize stained, checked and cracked eggs, or (2) it may refer to firms that are both horizontally and vertically integrated. The latter concept (2) is accepted as more applicable for this study.

Horizontal Integration

Integration means the bringing of parts into a whole. A horizontally integrated firm is a single profit maximizing entity or an entity of a cooperative nature in which a single management owns or controls a number of units, which together or separately, handle commodities either similar or complementary on the same level of the production process. The consolidation of two or more table egg farms does not bring under one control any more successive steps in the production process than were controlled previous to the merger and, therefore, would be classified as horizontal integration.

Integration through ownership will be classified "complete integration" and integration through contract and/or agreements will be called "quasi-integration."[3] These two patterns of horizontal integration are defined as follows:

1. A complete horizontally integrated firm may be either a single profit maximizing entity or an entity of a cooperative nature in which a single management "owns" or is "owned" by a number of units which together or separately handle commodities, similar or complementary, on the same level in the production process.

2. A quasi-horizontally integrated firm may be either a single profit maximizing entity or an entity of a cooperative nature in which a single management "controls" a number of units through contracts and/or agreements which together or separately handle commodities, similar or complementary, on the same level in the production process.

For comparative purposes, a non-integrated firm refers to a single profit maximizing entity which carries on a single operation in a single unit without contract or agreement to enter into other operations.

Vertical Integration

Vertical integration is defined as the linking together of two or more functions of the production and marketing systems under one management through ownership and/or contractual arrangements.

In line with the limitations under horizontal integration, two types of vertical integration may be defined:

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[3]Ewell P. Roy, Economic Integration In The Broiler Industry, Louisiana State University, Ph. D. Thesis, August 1955, pp. 8-10.

1. A complete vertically integrated firm is a single profit maximizing entity or an entity of a cooperative nature in which one unit on more than one stage in the production process are brought under a single managerial control and ownership.

2. A quasi-vertically integrated firm is a single profit maximizing entity or an entity of a cooperative nature in which one unit on more than one stage in the production process are brought under a single managerial control but not ownership.

Circular Integration

A circularly integrated firm is defined as one that is both horizontally and vertically integrated.

For purposes of this study, the two basic types of circular integration are defined as follows:

1. A complete circularly integrated firm is either a single profit maximizing entity or an entity of a cooperative nature in which a single management "owns" or "is owned" by a number of units all handling similar or complementary commodities on the same as well as successive levels in the production process.

2. A quasi-circularly integrated firm is either a single profit maximizing entity or an entity of a cooperative nature in which a single management controls but does not own a number of units all handling similar or complementary commodities on the same as well as successive levels in the production process.

Identification of Market Structures Within The Table Egg Industry

Non-Integrated Firms

Non-integrated table egg producers provide a reasonably good example of the purely competitive market structure. There is little opportunity for product differentiation and the number of table egg producers is sufficiently large that they do not perceptibly affect price. The product is readily transportable and the table egg producers and their marketing outlets are usually close together. In other words they are price takers.[4] When a table egg producer is not integrated, the size of the enterprise is usually small and the average cost may begin to rise at a relatively low output. When egg producers integrate they usually attempt to merchandise a differentiated product and exert some influences on price. This will, of course, remove these firms from the category of pure competition and put them in the position of a price maker.[5]

Integrated Firms

Integrated (quasi and complete) table egg producers are typical of firms under monopolistic competition. They are characterized by: (1) large numbers of sellers and an absence of any mutual interdependence, (2) a differentiated product, and (3) free entry of firms.

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[4]Tibor Scitovsky, Welfare and Competition - The Economics of a Fully Employed Economy, (Chicago: Richard D. Irwin, Inc., 1951), pp. 29-50.

[5]Ibid, pp. 247-318.

Product differentiation in the poultry industry develops in much the same way as in other industries. Consumers may prefer to buy from one firm rather than another because of personalities of the sales force, the difference in packaging and advertising or because of the firm's reputation. Thus, most differentiation is the result of a deliberate effort on the part of the seller to instill in the customer's mind that there is a real difference in products. Firms attempt this in an effort to protect themselves from intensive price competition.

Table egg producers differentiate their product by using brand names, different types of cartons, advertising, creating good will and building up a good reputation. The sales curve for eggs is not perfectly elastic when the marketing process culminates in sales to the consumers. If the price of eggs is reduced, the firm (egg producer) will gain some sales from other firms and if the price is increased, sales will be lost to other firms but in each case only to a limited extent if the price change is relatively small. The shape of the sales curve is dependent upon the differences (or what consumers think are differences) in the products.[6]

The number of table egg producers is too large to classify them either under oligopoly or monopoly. There is no mutual interdependence, therefore, each firm shapes its policies without regard to the policies of others.

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[6]Kenneth E. Boulding, Economic Analysis, (Third Edition; New York: Harper and Brothers, 1955), pp. 630-631.

Income and Price Elasticity of Eggs

Factors that influence the supply of eggs indicate that supply within a calendar year is influenced by price movements during the period. If the egg-feed ratio in the first half of the year, when producers are starting a majority of their chicks for flock replacement, is lower than the ratio for the same period the previous year, poultrymen usually start fewer replacements. If the egg-feed ratio is higher than the year before, more replacement chicks are started.

According to Judge, the estimated elasticity of egg supply, with respect to price, is 1.16. A one percent increase in price of eggs will bring forth an increase in supply of eggs of 1.16 percent. The estimated coefficient between the cost of the poultry ration and supply of eggs is 0.97. This is interpreted as meaning a one percent increase in the cost of the poultry ration will cause a 0.97 percent decrease in supply of eggs.[7]

The elasticity of demand is the relationship between a given percentage change in the price of a good and the consequent percentage change in quantity demanded. Elasticity may be stated as a numerical expression, obtained by dividing the percentage change in quantity demanded by the percentage change in price. In the case of a demand curve, quantity increases when price decreases, and vice versa, so the changes are of opposite sign. The elasticity of demand is, therefore, negative.

On the basis of elasticity, particular segments of demand schedules are grouped into three major classes: (1) elastic, (2) inelastic, and (3) unitary. An elastic demand schedule has an elasticity numerically greater

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[7]George G. Judge, Econometric Analysis of the Demand and Supply Relationships for Eggs, Connecticut (Storrs) Agricultural Experiment Station Bulletin 307, 1954, pp. 51-53.

than -1. A price change is accompanied by a larger than proportionate change in quantity demanded, and total revenue is greater at lower prices than at higher ones. An inelastic demand schedule has an elasticity that is less than -1. A price change is accompanied by a less than proportionate change in quantity demanded and total revenue is greater at higher prices than at lower prices. A unitary elastic demand schedule has a numerical ratio of -1 and a change in price does not affect total revenue.

The elasticity of demand for a commodity depends primarily upon ease of substitution of this commodity for other goods in the satisfaction of wants. When there are several goods that consumers consider about equally desirable for the satisfaction of particular wants, the demand schedule for each good will be elastic. When there are no satisfactory substitutes, price changes will have relatively little effect upon the quantity demanded.

Elasticity is also affected by the satiability of the want for which the good is acquired. If the want is quickly satiated, the demand will be less elastic than if it took longer to satisfy the want. Substitutability, and thus elasticity, are affected by durability of the product and the time interval for which the schedule is relevant. When goods can be used for a number of years, consumers are not in the market for a considerable period of time after the purchase. Non-durable goods are more sensitive to price changes, therefore, the demand schedule is more elastic. The demand schedules for durable goods are more elastic over a longer interval of time than they are during a short period. Habit can also affect elasticity of demand. When consumers become accustomed to buying goods, a price increase may not cause them to change to a substitute at the beginning, but over a longer period the effects of a price change will be important. The larger the

amount spent on a product, generally the more inelastic the demand.

The elasticity of demand is of tremendous importance to a farmer who produces perishable crops. If the demand for a good is inelastic, a large crop may actually bring in less money than a small crop. Crops that can be stored are less likely to have a relatively inelastic demand, for the demand in any one year comes not only from consumers but also from speculators.

Cross-elasticity of demand is important when considering the purchase of eggs. It is the measurement of the influence of price of one good on demand for another, or the relationship of percentage change in quantity demanded of one good which occurs in response to a particular percentage change in price of another good assuming the price of the first good remains constant. If cross-elasticity is positive, the two goods are considered substitutes for each other. There are two cases where cross-elasticity is negative, (1) when a decline in the price of one good leads to an increase in the quantity of the other good purchased, and (2) the case of complementary goods, where the increased use of one necessitates the use of additional units of the other.

Complementary goods are important to the table egg producer for they are instrumental in increasing the sale of his product. Increased sales of ham and bacon usually cause an increase in sale of eggs. A decline in price, by stimulating increased use of the good, will raise the marginal utility of the other good and increase the quantity of the latter purchased.

Measures of elasticity of demand with respect to price of eggs during the period of 1931-1954 ranged from -0.09 to -1.96 according to Gerra. Based on the most statistically significant coefficient, a one percent change in retail price of eggs, on the average, would be associated

inversely with about a - 0.4 percent change in per capita consumption of eggs, after allowing for the effect of other economic factors. To increase per capita consumption by one requires a price concession at the retail level of about 2.5 percent, with an accompanying decline in consumers total expenditures for eggs.[8]

Judge reports price elasticity of demand for eggs was - 0.58. This means, other things being equal, that consumption of eggs will decrease by approximately 0.6 of one percent if the price of eggs increases by one percent. Since price elasticity is less than one, total revenue from a large production of eggs would be less than from a small output of eggs.[9]

Gerra points out in his study, for the years 1931-1941 and 1946-1954, that although measures of income elasticities obtained from cross-section data tend to be smaller than measures from time series data, it appears reasonable to assume that elasticity of demand with respect to income for eggs is very low, perhaps in the neighborhood of 0.1. This would imply that if income per person increased about 10 percent, and the price of eggs and other variables remain unchanged, egg consumption per person would rise about one percent.[10]

In another study of income elasticity, it was reported that an increase of one percent in per capita disposable income, other things

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[8]Martin J. Gerra, The Demand, Supply, and Price Structure for Eggs, United States Department of Agriculture, Agricultural Marketing Service, Technical Bulletin No. 1204, November 1959, pp. 1-6.

[9]Judge, op. cit. pp. 50-53.

[10]Gerra, op. cit., pp. 2-4.

remaining equal, will increase demand for eggs by approximately 0.44 percent. It appears that price elasticity is definitely larger than income elasticity. If this is true, a given percentage increase in the price of eggs, with marketing charges and average and marginal cost curves of the firm remaining constant, will increase farm income more than will the same percentage increase in per capita disposable income.

Fox, also, reports for the period 1922-1941 that the retail price of eggs responded more sharply to changes in production than did prices of any common livestock product. He also reported that the change of - 2.3 percent in retail price of eggs probably understates the true effect of one percent change in per capita production of eggs.[11]

Improved quality, increased advertising and better merchandising methods has helped increase demand for eggs but family income, size of family and race or nationality are the most important factors that affect demand for eggs at a given time. The larger the total family income, the greater was the demand for eggs. Per capita income seems to have an even more pronounced effect than total family income. It has been reported that Jewish people tend to eat the most eggs on a per capita basis and that negroes eat the fewest.[12]

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[11]Karl A. Fox, The Analysis of Demand for Farm Products, United States Department of Agriculture, Agricultural Marketing Service, Technical Bulletin, No. 1081, 1953, pp. 52-53

[12]A. William Jasper, Some Highlights From Consumer Egg Studies, United States Department of Agriculture, Production and Marketing Administration, Agriculture Information Bulletin No. 110, June 1953, p. 3.

NON-INTEGRATION IN THE TABLE EGG INDUSTRY

A non-integrated firm is defined as a profit maximizing entity which carries on a single operation in a single unit without contract or agreement to enter into other operations and is used as a benchmark in discussing complete and quasi-integration patterns. As was discussed in Chapter II, non-integrated firms closely resemble the purely competitive market structure.

Integration patterns develop within the scope of economic, social and political environments. Firms that are small and use little capital, such as some agricultural enterprises, are likely to have less integration than those requiring large investments. Financial independence, therefore, may be the prerequisite to firm independence and non-integration. As an industry, such as the table egg industry, develops in its technology and commercial aspects, the previously independent firms find their atomistic position difficult to maintain. There is an increasing demand for input factors and small firms may have to expand to compete for inputs.

Case A - Non-Integration

This farm is located in the central part of Georgia. The major agricultural enterprises are cotton, corn and beef cattle. Poultry is of secondary importance which is typical of many farms in the state. The farm is partically mechanized as the necessary equipment is owned to produce the crops, but these crops are harvested by hand unless custom harvesting is used. The farm consists of 180 acres of which 95 acres are utilized for crops.

The farm owner and operator is forty-five years of age and finished high school. He depends upon help from personnel of the Agricultural Extension Service in managing his farm. Most of the work with the poultry flock is done by the farm owner's wife, but neither the farm owner nor his wife spend any time to improve the market position for the table eggs.

This firm is a price taker with regard to the poultry enterprise in that it does not influence market price of inputs it purchases nor does it influence the price it receives for table eggs. It is caught in an economic squeeze and has no bargaining power. Unless production costs are decreased or the prices received increased, firms such as this may find it necessary to discontinue operating or become integrated.

An average of 1000 layers are kept that are purchased as ready-to-lay pullets. Started pullets cost $1.89 at 24 weeks of age and a complete laying ration $82.00 per ton during 1960. Cost of producing table eggs under the above conditions will be higher than for firms that are integrated and have bargaining power. Actual cost of producing a dozen eggs was $0.348 for the calendar year 1960. This includes feed cost, flock depreciation, labor, depreciation on housing and equipment, interest on investment in houses, equipment and hens and miscellaneous items such as insurance, litter and utilities. The average price received for eggs was $0.374 during the period specified above. Egg production on a hen-housed basis was 222 eggs. Net returns above total cost of production was $0.026 per dozen or about $0.48 per hen. Total cost of production does not include any marketing costs, therefore, the net return above all costs is lower than $0.48 per hen per year.

Table III

Summary of Case Study on Non-Integration

Age of owner and operator	45
Education of owner and operator	High school graduate
Type of ownership	Owner
Acres in farm	180
Major enterprises	Cotton, corn and beef cattle
Other enterprises	Eggs, pecans and vegetables
Average number of hens	1000
Average cost of laying ration	$82.00 per ton
Cost of 24 week old started pullet	$ 1.89
Hen-housed egg production	222
Cost per dozen eggs	
Feed	$0.185
Flock depreciation	$0.084
Labor	$0.040
Other	$0.039
Total Cost	$0.348

QUASI-INTEGRATION IN THE TABLE EGG INDUSTRY

The growing complexity of the modern market economy places more emphasis upon coordination and control. Scientific agriculture has led to specialization and has created a mutual interdependence among firms involved in producing and marketing table eggs. Mass production techniques cannot be used effectively without a reasonably uniform flow of goods.

Through integration a firm can have more functions and realize more efficiencies through internal and external economies of scale. Business firms have found it desirable to set-up farmers, through contracts and issuance of credit, in table egg enterprises. These growers are more technicians than farmers, because they follow instructions for an assured income.

Some advantages of quasi-integration for the dealer and/or producer are: (1) less capital is needed by the farmer, (2) the dealer can secure a large number of table eggs quickly, (3) egg quality is usually high, and (4) eggs are produced on a uniform basis. It is easy to get growers on a contract program as it looks attractive on the surface. The difficulties arise after the contract is signed and the poultryman finds that he must work 8 to 10 hours each day if he has an enterprise large enough to make a comfortable living.

Some dealers feel it is better to completely integrate rather than quasi-integrate. Their hypothesis is that laying houses should be constructed on one's own farm and a caretaker paid a weekly salary for taking care of the hens. The dealer would have better control of the egg enterprise as he can force the hired labor to manage the birds according to his recommended specifications.

Some disadvantages of quasi-integration are: (1) length of laying period is approximately 15 months and economic conditions can change drastically during this period, (2) it is difficult to secure good, hard working poultrymen, (3) it is hard to control laying house management, and (4) money is tied-up too long. Some dealers feel a penalty clause is unworkable because the poultryman might by devious means attempt to regain his cost of the penalty.

Producers may feel they are making a lot of money for the dealer and very little for themselves. They think they are being imposed upon when the dealer requires them to manage the laying flock in a particular way. More antagonism develops when the dealer changes the contract during the production year of the hens. When the dealer fails to keep his part of the contract, the producer does not feel he is obligated to keep his part of the agreement.

Too little thought has been given to preparing a contract that would be equitable for dealer and producer. The feed dealer is interested, primarily, in feed tonnage and eggs are of secondary importance. With the table egg producer, eggs marketed are of primary importance. A marketing firm, that contracts for table eggs, is interested in top quality eggs at the lowest possible cost.

The table egg producer makes a superficial study of an egg contract and fails to calculate the expenses to be incurred, so the contract appears satisfactory. Often the dealer and producer are disappointed with the results.

Types of Quasi-Integration

The first dealer in Georgia to quasi-integrate developed on a quasi-circular integration pattern. He contracts with one group of farmers to grow replacement pullets and another group to produce table eggs. This dealer has been very successful and has over 200,000 hens on contract. This type of integration pattern began in Georgia as early as 1948.

Quasi-circular integration is the most important quasi-integration pattern in Georgia followed by quasi-horizontal integration.

Quasi-vertical integration is unimportant in Georgia as one seldom finds a dealer that contracts with only one grower to produce table eggs and only one to grow replacement pullets. This integration pattern is more common when a dealer is beginning his contract program. It is rare for a dealer to maintain the same number and size of production units. If the dealer does not expand he usually discontinues his contract table egg program.

Quasi-Horizontal Integration

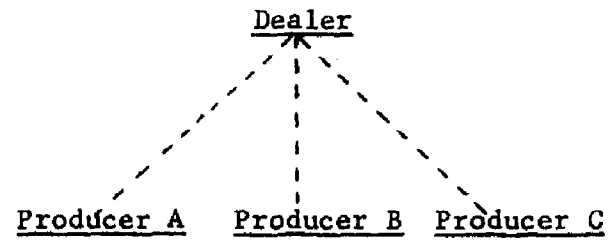
The typical quasi-horizontal integration pattern, as shown in Graph 1, refers primarily to the producer level. The dealer pays the producers for each dozen table eggs produced under a contract that contains penalty and bonus clauses. Under this type of contract, the farmer furnishes the poultry house, equipment, labor, litter, refrigerated egg room, utilities and cleans, grades and packs the eggs at the farm. The dealer furnishes ready-to-lay pullets, feed, supervision and other minor production items and picks up the eggs at the producer's farm.

Graph 1

Diagrammatic Sketch of Quasi-Horizontal Integration Pattern*

Partial list of production levels in table egg industry

Producing table eggs



Growing replacement pullets

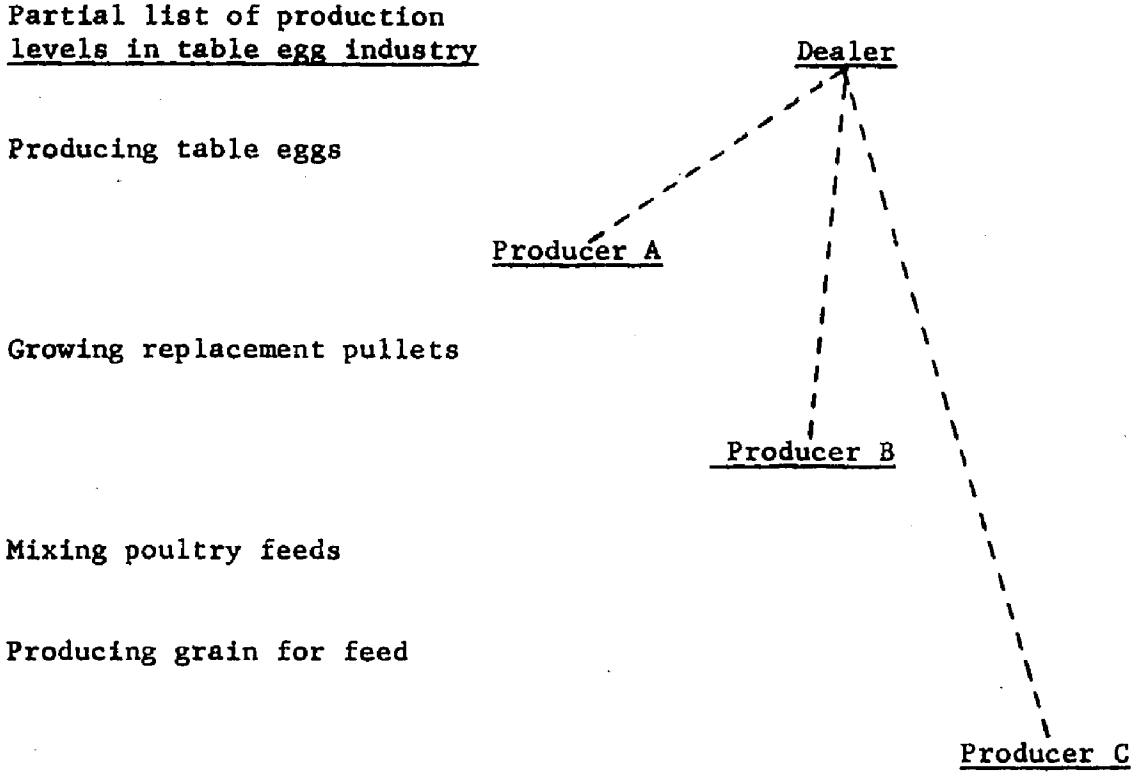
Mixing poultry feeds

Producing grain for feed

*The dealer in this example controls several production units on the same production level. The producers constitute the horizontal aspect of this integration pattern.

Graph II

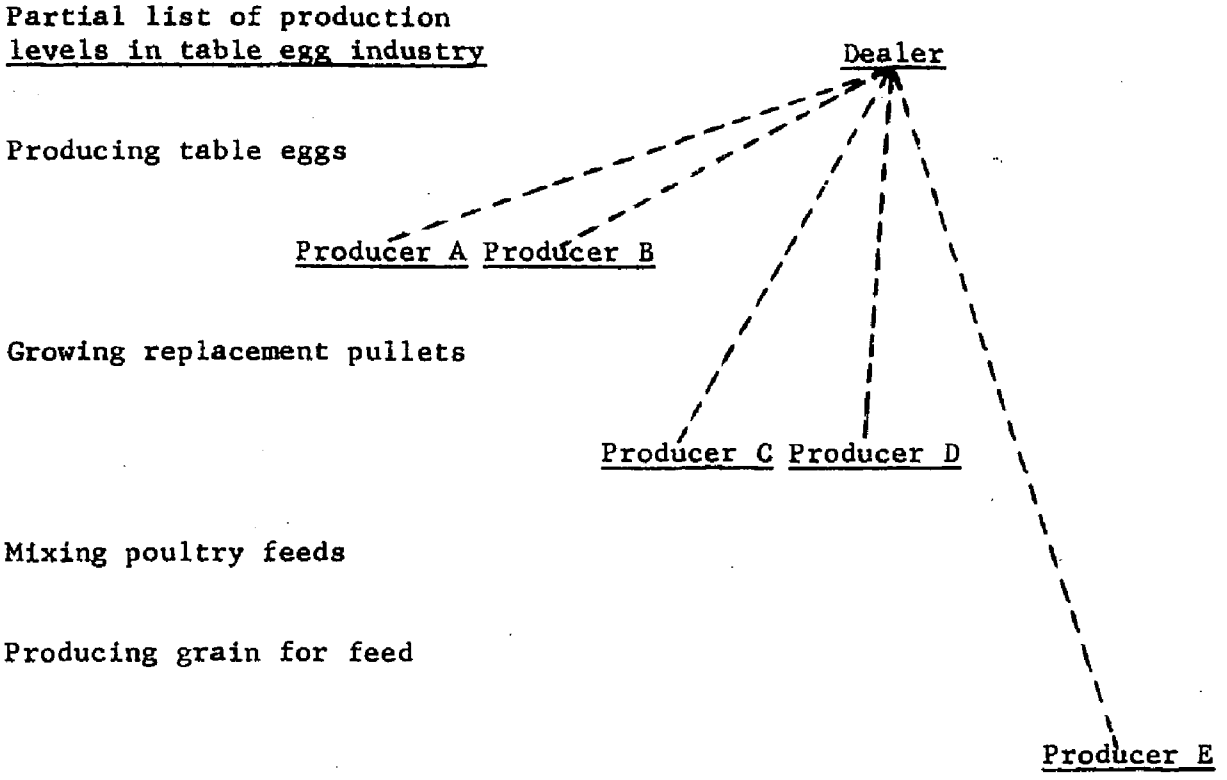
Diagrammatic Sketch of Quasi-Vertical Integration Pattern*



*The dealer in this example controls one production unit on several production levels.

Graph III

Diagrammatic Sketch of Quasi-Circular Integration Pattern*



*The dealer in this example controls several production units on two or more production levels.

Feed dealers, typical of most quasi-horizontal integrated programs, have hens on contract purchased as started pullets. Most dealers began their integrated program by paying five cents per dozen table eggs produced with no penalty or bonus clauses. Changes were made later to a slightly higher payment per dozen for all Grade A eggs, but undergrades were penalized one to two cents per dozen.

A number of feed dealers began similar contract programs in 1958. Farmers were furnished ready-to-lay pullets and other items as enumerated above with the farmer providing the other inputs. Egg producers were paid $1.00 per hen for each 12 months period or five cents per dozen eggs produced. Many of these payment plans were changed on January 1, 1960 to six cents per dozen for Grade A large eggs and four cents per dozen for all Grade A medium, small and peewee eggs. There was no payment made for undergrades, such as stains, dirties and checks, but all eggs produced were delivered to the dealer. The insertion of a penalty clause of no payment for undergrades provided the necessary incentive for egg producers to do an adequate job of management, including the proper cleaning of eggs. One instance was cited where a dealer was receiving too many stained and dirty eggs. The egg producer had been requested to do a better job of cleaning the eggs but refused as long as his contract specified $1.00 per hen for each 12 month period. As soon as the new contract, which included no payments for undergrades, went into effect on January 1, 1960, the egg producer purchased an egg washer and began to pack clean eggs.

A few feed dealers maintained a payment plan of five cents for each dozen table eggs produced with no bonus or penalty clauses, until they discontinued this segment of their business. They felt contract broiler

production contained fewer risks and concentrated their efforts in this direction. Several of the feed dealers feel that quasi-integration in the table egg industry is an unsound business venture.

Quasi-Vertical Integration

This pattern of integration is common with a small feed dealer and other firms that are beginning a contract table egg program. The dealer usually contracts for the growing of replacement pullets and production of table eggs. It is rare that quasi-vertical integration includes more than growing replacement pullets and producing table eggs. There are a few instances where the dealer developed a marketing program. To qualify under this pattern of integration, there must be more than one level in the production process brought under the same managerial control but there can be only one production unit on each level. Contracts under quasi-vertical integration are similar to the ones used in quasi-horizontal integration.

Typical contracts specify that the feed dealer will pay the pullet grower a specified amount of money per pullet per week with the dealer furnishing chicks, feed, medicines, vaccines, litter, utilities and supervision and the producer furnishing the poultry house, equipment and labor. The dealer delivers the chicks to the pullet grower's farm and moves them on a date agreed to in advance.

One contract of this type pays the producer one cent per bird per week until the pullets are moved. It does not contain bonus or penalty clauses and the dealer is having varying degrees of success in getting good pullets produced.

Quasi-vertical integration is not increasing in importance in Georgia. The trend is more toward quasi-horizontal (at the producer level) and quasi-circular integration.

Quasi-Circular Integration

The larger feed dealers and egg producers are the firms integrated on a quasi-circular basis. The typical contracts are similar to a combination of the ones used in quasi-horizontal and quasi-vertical integration.

Some of the larger enterprises were initiated by local feed manufacturers. One program had a maximum of 150,000 hens in production. The contract payment plans usually specified the pullet growers would receive one cent per bird per week for 24 weeks. Pullet growers furnished housing, equipment, litter, labor and utilities and the feed manufacturers furnished the other inputs. Some of the table egg producers were paid two cents per hen per week, while others were paid five cents per dozen. Table egg producers furnished housing, equipment, labor, litter, utilities and a refrigerated egg room and the feed manufacturers furnished ready-to-lay pullets, feed, supervision, egg cases and picked up the eggs at the farm. Some of the feed manufacturers had a regulation that would not allow their servicemen to place laying hens with former broiler producers. This restriction was necessary because of some undesirable experiences with contract egg programs.

Feed company servicemen have found where poultrymen were feeding poultry feed to hogs. Since many contracts did not contain a feed conversion clause there was no way to penalize the growers except move the hens. Contracts usually contained a clause which allowed the birds to be moved at any time the specifications of the contract were not being

followed, but it is almost impossible to move birds in high production without affecting their rate of lay.

Case Studies

Quasi-Integration Patterns

The four major production levels in the table egg industry are: (1) producing grain for poultry feed, (2) mixing poultry rations, (3) growing replacement pullets, and (4) producing table eggs. Quasi-integration may involve only one level or may involve all of them.

Case A - Quasi-Horizontal Integration

This dealer is typical of the ones that contract for the production of table eggs. He started this program in 1958 after being in the broiler hatching egg business for two years. He is in his early thirties and a college graduate. One of the larger hatchery operations in the country and the Agricultural Extension Service advises with him on this program. Most of the producers are over forty years of age and are general farmers that produce, primarily, cotton and corn. The management of all the poultry flocks was good. The need for additional income on a regular basis is one of the major reasons for the success of this program.

This dealer has approximately 100,000 hens on contract, divided among 18 producers. The replacement pullets are purchased from a pullet grower and the feed (until recently) from a local feed manufacturer. The ready-to-lay pullets cost $1.96 per pullet in 1960. He is considering producing the pullets himself as he can save $0.35 on each pullet. Laying mash

cost $73.00 per ton when he was purchasing a complete feed but he is now mixing feed from the "ground up" and the laying ration costs $61.00 per ton. The hen-housed production for all flocks was 243 eggs.

The payment schedule for Grade A eggs is $0.05 per dozen when price of eggs is under $0.30; $0.06 per dozen when price of eggs is between $0.30 and $0.40; $0.07 per dozen when price of eggs is over $0.40. This payment schedule is based on large eggs as priced each Tuesday in the Urner-Barry price report. The average bonus payment earned on feed conversion and egg production was $0.09 per hen during 1960. Average producer payment per dozen eggs was $0.057 during 1960 when a payment of $0.03 per dozen for cracks and bloods and no payment for dirties and stains were considered. Total cost of producing eggs under this program was $0.316 per dozen for the same period.

Hens are kept in units of 5,000 to 6,000. All of the houses and equipment and arrangement of equipment are practically the same for all units. This dealer will not contract with a producer who has ever been in the table egg business.

He recently purchased rights to an egg market and has constructed a feed mill. This dealer is now integrated on a complete and a quasi-basis and is circularly integrated.

Case B - Quasi-Vertical Integration

The firm contracts with one producer to grow replacement pullets and another for the production of table eggs. This is a relatively small contract program that has 6,000 hens.

The contracting firm is a small feed dealer in central Georgia. The

dealer is approximately forty-five years of age and rather conservative. The pullet grower and the egg producer are about this same age and operate general farms. The management on both farms is above average as the dealer was very careful in selecting these producers.

The dealer pays the pullet grower one cent per bird per week for 24 weeks. The pullet grower furnishes the poultry house, equipment, labor utilities and litter. The dealer furnishes the chicks, feed, medication, vaccines, supervision and other minor items. A replacement pullet at 24 weeks of age costs $1.64. This is approximately $0.20 less than a started pullet would cost if purchased 24 weeks old. Twenty-four hundred dollars was saved last year with this segment of the enterprise.

The dealer pays $0.05 per dozen for Grade A eggs and $0.03 for undergrades. There were five percent undergrades which made the payment to the producer $0.048 per dozen. The production for the flock was 241 eggs per hen on a hen-housed basis. Input items furnished by the dealer include ready-to-lay pullets, feed, supervision, medicines, egg cases, fillers and flats. Feed cost averaged $76.00 per ton during 1960. The egg producer furnished the poultry house, equipment, labor, utilities, refrigerated egg room and a few other minor items. Net returns to labor for the egg producer was $0.025 per dozen or a total of $3,012.50 for the twelve month period.

Total cost of producing a dozen eggs was $0.295. Total cost, as defined here, includes feed cost, flock depreciation, producer payment, cost of supervision, interest on investment in hens by the dealer and $0.005 per dozen for miscellaneous items.

Case C - Quasi-Circular Integration

This firm contracts with several producers for replacement pullets and table eggs. It, also, produces replacement pullets for sale.

The dealer and producers are located in the northern part of Georgia. The dealer is approximately forty years of age and the producers vary in age from about thirty to over fifty. Most of the producers have a grade school education and are typical of the farmers in the hills of North Georgia. The dealer attended college but did not graduate. Most of the producers have a small herd of beef cattle, grow a few acres of corn, and produce vegetables and fruit for home use. The management of the poultry flocks was very good as is indicated by the egg production and the excellent pullets that are produced.

During 1960, this dealer had contracts for approximately 45,000 layers. In addition to growing out this number of replacement pullets, the dealer produced 53,000 for sale to other egg producers.

Started pullets are grown on four farms. The dealer furnishes baby chicks, feed, medication, vaccines, supervision, utilities and other minor items. Input items furnished by the pullet grower include poultry house, equipment, labor and litter. The pullet growers received one cent per bird per week with a two cent bonus if the mortality was under five percent for the 22 weeks. The average cost of growing a replacement pullet to 22 weeks of age was $1.57. This cost varied from $1.51 to $1.68 because of difference in producer payments and in the amount of feed and utilities used. This dealer moved the pullets to the producer's farms at 22 weeks of age rather than at 24 weeks as some dealers are doing. The selling

price for 22 week old started pullets was listed at $1.70 per pullet.

There were eight table egg farms included in this contract program with capacities ranging from 5,000 to 7,500 hens. The payment schedule was $0.0525 cents per dozen for all Grade A eggs and 4 cents per dozen for all other eggs. The average production for all hens in this enterprise was 231 eggs on a hen-housed basis. There were 8 percent undergrades which included stains, dirties, bloods, checks and cracks. The average producer payment was $0.052 per dozen. Feed cost for the hens averaged $70.00 per ton for the calendar year 1960. Total cost of producing a dozen eggs was $0.297 which included feed cost, flock depreciation, producer payments, cost of supervision, interest on investment in hens by the dealer and $0.007 for miscellaneous items. The above cost was calculated using the actual cost of the replacement pullet to the dealer and not the selling price.

Table IV

Summary of Case Studies on Quasi-Integration

	Case A Horizontal*	Case B Vertical	Case C Circular
Type of Business	Feed Dealer	Feed Dealer	Feed Manufacturer
Produces table eggs	Yes	Yes	Yes
Grows pullets	No	Yes	Yes
Other businesses	Packer	Packer General Store	Packer Broiler Production
Average number of hens	100,000	6,000	45,000
Average cost of laying ration	$73.00 per ton	$76.00 per ton	$70.00 per ton
Cost of replacement pullets	$1.96 @ 24 wks.	$1.64 @ 24 wks.	$1.57 @ 22 wks.
Hen-housed egg production	243 eggs	241 eggs	231 eggs
Cost per dozen eggs			
Feed	$0.155	$0.167	$0.158
Flock depreciation	.080	.065	.064
Producer payment	.061	.048	.052
Other	.020	.015	.023
Total cost per dozen eggs	$0.316	$0.295	$0.297

*This integration pattern refers only to the producers that are on one and the same production level in the production process. If the feed dealer were considered as being a part of this integration pattern, both quasi-horizontal and quasi-vertical integration patterns would result.

COMPLETE INTEGRATION IN THE TABLE EGG INDUSTRY

Types of Complete Integration

Complete integration developed with the beginning of the table egg industry in that many poultrymen raised replacement pullets, produced grain for poultry feed and marketed their own eggs. During the earlier years of development, complete vertical integration was more prevalent than either complete horizontal or complete circular integration but production units were very small.

Complete integration on a commercial scale has developed primarily through constructing farm feed mills, initiating started pullet operations, producing the grain portion of poultry feeds and carrying out more of the marketing functions. Development through farm feed mixing has been important even though a tremendous amount of money has been spent by feed manufacturers in an attempt to sell poultrymen a complete ration. The very nature of the term "feed brand" indicates differentiation which may involve such factors as advertising, services of trained service personnel, special management and marketing programs and the issuance of credit. All these factors are important in the attempt by feed manufacturers to keep individual poultrymen from mixing their own feed. Feed companies are interested in tonnage which lends impetus to control of growing operations. Since feed constitutes approximately fifty-five percent of the cost of producing eggs, a slight reduction in price of feed can have a very important bearing on profits. There is a trend in Georgia toward feed mixing facilities on producer's farms. This trend is taking three forms: (1) using a protein concentrate and grain, (2) using a super concentrate, soybean oil

meal and grain, and (3) mixing the complete ration from the "ground up." The feed manufacturers have been reluctant to manufacture a protein concentrate to be used with grain or with soybean oil meal and grain. One national feed manufacturer started a protein concentrate program over a decade ago and others have been forced to follow. Recently a few feed manufacturers have initiated a program of merchandising a super concentrate to be mixed with soybean oil meal and grain. The suppliers of vitamins, minerals, etc. have begun making these ingredients available, making it possible for the egg producers to mix feeds from the "ground up."

Complete Horizontal Integration

The typical pattern under complete horizontal integration is where a firm owns several farms on which either started pullets are produced or layers are kept.

The large increase in production of started pullets began in Georgia after 1955. The factors that were important in initiating this trend were specialization and increased efficiency. Buying started pullets is justified when housing, equipment, labor, and capital can be utilized more efficiently than is possible when the egg producer grows his own pullets. When a poultryman devotes all of his time and efforts to the laying flock, overall costs per dozen may be lower. He, in effect, becomes an "egg production specialist", which further justifies the purchasing of started pullets. It is possible for a started pullet grower to produce a better pullet than an egg producer. The best assurance an egg producer can have that losses from lymphomatosis will be kept to a minimum is for his replacement pullets to be grown completely isolated from mature birds. This

is possible with a pullet grower as he does not keep mature chickens on his farm. As egg farms become larger there will likely be a higher percentage of the replacement pullets grown by pullet growers than at the present time.

Farms on which an egg producer keeps layers are usually similar as to number of birds kept, and type of housing and equipment used. The number kept on each farm is usually what one family can properly care for during the average work week. Caretakers are paid a weekly salary and furnished a dwelling house with a space provided for a garden and a small fruit orchard. This integration pattern gives the owner more control over the birds than is possible with quasi-integration. Recommended management practices can be carried out on all farms on a uniform basis. Any necessary changes can be initiated immediately as the production units are the property of the table egg producer.

Complete Vertical Integration

The trend toward larger table egg producing units continues in Georgia and the Southeast. This development is conducive to complete vertical integration as farm feed mixing becomes more practical and top quality replacement pullets grown under the supervision of the egg producer become more desirable. Some table egg producers have completely integrated backwards to the production of corn and other grains for poultry feeds and forwards to the establishment of a retail marketing outlet for eggs.

One important factor that has encouraged complete vertical integration is the advance in research that tends to make the production phase more of a science and less of an art. Another factor is gearing the

production process so that a specified quantity can be produced according to a predetermined schedule.

Complete Circular Integration

Complete circular integration is increasing in importance as the table egg flocks become larger and firms engage in milling, hatching and packing, among other functions.

There is less risk from a disease epidemic when birds are placed on widely separated farms. Management practices can still be standardized and the work load of management and supervisory personnel changes very little. In most instances, there is a dwelling house as well as poultry houses on the farms purchased by the table egg producer to take care of expansion. In other instances, the egg producer purchases a farm with a dwelling house and constructs new poultry houses.

A firm representative of this integration pattern, owns several farms where replacement pullets are grown and other farms where table eggs are produced. In addition, the firm usually owns a feed mill for farm mixing of poultry feeds and carries out a well organized marketing program.

Case Studies

Complete Integration Patterns

Case A - Complete Horizontal Integration

The owner started in the poultry business five years ago with a small feed store where he bought table eggs from producers that used his feed. This enterprise is located in the northwest part of Georgia on

seven farms that have a total capacity of 50,000 layers. This dealer began a contract egg program two years ago but discontinued it as he could produce table eggs one to two cents per dozen less by having the hens on his farms. He is in his late thirties and attended college but did not graduate. He has recently hired an experienced poultryman to service the flocks and feels that the cost of this serviceman will be more than repaid by the improvement in management.

Poultry flocks are cared for by resident managers that are paid $45.00 per week and furnished a house and garden space. The dwelling houses have a rental value of $25.00 per month. Each resident manager (poultryman) cares for approximately 7,000 layers. The average hen-housed egg production was 234 eggs which makes the cost of labor $0.019 per dozen.

The complete laying ration is purchased from a local feed manufacturer on a very competitive basis. It cost $4.00 per ton more than if the feed had been mixed from the "ground up" in a farm feed mill and only about $1.50 per ton more if a protein concentrate and grain had been used. This firm did not purchase a feed mill and mix its own feed because of a lack of capital and the laying ration cost only $59.00 per ton plus $0.50 per ton for hauling. It required 4.7 pounds of feed to produce a dozen eggs which makes the feed cost $0.14 per dozen.

Started pullets cost this firm $1.60 at 24 weeks of age. This is $0.20 to $0.25 more than they would cost if the firm produced them on its own farms or $0.01 to $0.0125 per dozen more for flock depreciation. The manager did not feel they should expand to other production levels at the present time as it would place a strain on their finances. He said they planned to expand at a later date, but wanted to do it on a sound basis.

Total cost of producing a dozen eggs was $0.257 which included $0.140 for feed, $0.065 for flock depreciation, $0.019 for labor, and $0.033 for depreciation on housing and equipment, interest on investment in housing, equipment and hens and minor miscellaneous items.

Case B - Complete Vertical Integration

This firm is vertically integrated to the extent that it produces corn to be mixed with a protein concentrate for feed, grows out replacement pullets, operates a farm feed mill, produces table eggs and does its own marketing to stores and restaurants.

The owner is 55 years of age and has been in the poultry business over a decade. He has a grade school education but is well informed on poultry production. The farm is located in the southern part of Georgia where the soil and topography is well adapted to the production of corn.

This firm grows 245 acres of corn that is used in poultry feeds with an average yield of 93.5 bushels per acre. The total cost of producing corn was $0.72 per bushel which includes rent on land, all necessary plowing and cultivation, fertilizer, labor, cost of equipment, harvesting and other minor costs. In 1960, corn was selling for $1.05 per bushel which represented a profit of $0.33 per bushel. Sufficient corn is produced for the table egg enterprise of 15,000 hens plus the replacement pullets.

Farm feed mixing is another area in which a considerable savings is realized. The average cost of a 32 percent protein concentrate during 1960 was $94.00 per ton. Corn is figured at $1.15 per bushel which allows $0.10 per bushel to take care of shrinkage, storage cost, handling and other minor items. Cost of grinding the grain and mixing it with the

concentrate was $3.50 per ton. This cost includes labor, depreciation, electricity, interest on investment and other minor items. A complete laying ration cost an average of $60.45 per ton and the growing ration $57.75. A laying ration delivered in bulk would have cost $77.00 per ton and the growing ration $75.00 per ton. A savings of $0.83 per hundred pounds of laying ration was possible which means about that amount saved on feed cost per hen per year as a hen will consume approximately 100 pounds of feed during a 12 month period. This is a savings of about $12,500 per year that was made possible by adding a farm feed mill.

The cost of growing a replacement pullet is considerably less than if they were purchased. Chick cost averaged $0.44 per pullet chick for the strain used. Mortality cost during the growing period was approximately $0.03 per pullet. Miscellaneous items that included vaccines, debeaking, medicines and other minor items were figured at $0.06 per pullet. Feed cost was about $0.67 using the actual cost of starting and growing feeds. Labor cost, depreciation on housing and equipment, utilities and interest on investment was only $0.0075 per bird per week or $0.18 per pullet to 24 weeks of age. The total cost of growing a replacement pullet to 24 weeks of age was $1.38. Twenty-four week old started pullets, of the strain used, cost $1.89 per pullet. The cost of growing a replacement pullet to 24 weeks of age using the cost of feed if it had been purchased as a complete ration would have been $1.57 per pullet or $0.19 more than the cost using the home mixed feed. A savings of $0.41 per pullet is realized between the actual cost of the 24 week old replacement pullets and the cost if the pullets had been purchased or a total savings of $6,150 for the 15,000 replacement pullets.

The total cost of producing a dozen eggs, taking advantage of all savings possible, including the actual cost of corn plus $0.10 per bushel for shrinkage, labor and other minor items, was $0.229 as the average hen-housed production was 237 eggs. Total cost includes feed, flock depreciation, housing, equipment, interest on investment in housing and equipment, interest on investment in hens, labor and a miscellaneous cost of $0.02 per dozen. Using the cost of a commercial feed for growing out replacement pullets and for the hens would have increased the cost approximately $0.065 per dozen eggs or a total cost of $0.294 per dozen.

Case C - Complete Circular Integration

This firm has several pullet growing and table egg production units, owns a feed mill that mixes feed from the "ground up" and an egg processing plant to clean, size and carton the eggs.

This enterprise is located in the northern part of Georgia. The owner is in his late forties and is a high school graduate. Replacement pullets are grown out on four farms and laying hens are kept on five farms and all of these units are within six miles of each other. The caretakers are paid a weekly salary of $50.00 and furnished a house.

Savings have been possible through farm mixing of feed from the "ground up." Ingredient cost for a laying ration was $53.00 per ton during 1960. Cost of grinding and mixing this feed and delivering it to the poultry houses was $2.00 per ton. This cost included labor, depreciation, electricity, interest on investment and other minor items. The total cost of the complete laying ration was $55.00 per ton. A commercial laying ration, delivered in bulk, would have cost $74.00 per ton for the

same period. A savings of $19.00 per ton of feed is realized or approximately $0.95 per hen per year. A total savings of $38,000 was made possible by adding a farm feed mill as this firm keeps 40,000 laying hens.

The cost of growing a replacement pullet to 24 weeks of age is reduced by using farm mixed starting and growing rations that cost $53.00 per ton. Chick cost was $0.40 per pullet chick. This lower price was possible because of the number purchased and because of a "special deal" this firm had with the hatchery. Feed cost to 24 weeks of age was $0.61 per pullet. Mortality cost was $0.025 per pullet and miscellaneous costs which included vaccines, debeaking, medicines and other minor items was $0.055 per bird. Labor cost, housing, equipment, interest on investment, utilities and other minor items were two-thirds of a cent per bird per week or $0.16 for the twenty-four week period. Total cost of growing a replacement pullet to 24 weeks of age was $1.25. This is about $0.50 less per pullet than if they had been purchased, or a total savings of approximately $20,000.

Total cost of producing a dozen eggs was $0.224. This includes $0.124 for feed, $0.044 for flock depreciation, $0.017 for labor, $0.025 for miscellaneous items and $0.014 for depreciation on housing and equipment and interest on investment in housing, equipment, and hens, as the hen-housed production was 252 eggs. Total cost would have been $0.279 per dozen if all feeds had been commercial rations. A savings of $0.055 per dozen or $1.16 per hen per year is realized. This figure does not agree with the one given above on savings possible per hen per year using farm mixed feed as the above figure does not consider the savings on growing out replacement pullets to 24 weeks of age.

Table V

Summary of Case Studies on Complete Integration

	Case A Horizontal	Case B Vertical	Case C Circular
Type of business	Hatchery	Egg producer	Egg producer
Production level(s)	Producing eggs	Producing corn Growing pullets Mixing feed Producing eggs	Growing pullets Mixing feed Producing eggs
Other businesses	Packer	Beef Cattle Packer	Packer
Average numbe of hens	50,000	15,000	40,000
Average cost of laying rations	$59.50	$60.45* $52.20**	$55.00
Cost of replacement pullets	$1.60 @ 24 wks.	$1.38 @ 24 wks.	$1.25 @ 24 wks.
Hen-housed egg production	234 eggs	237 eggs	252 eggs
Cost per dozen eggs			
Feed	$0.140	$0.120* 0.138**	$0.124
Flock depreciation	0.065	0.051	0.044
Labor	0.019	0.020	0.017
Other	0.033	0.038	0.039
Total cost of egg production	$0.257	$0.229* $0.247**	$0.224

*Corn figured at actual cost plus $0.10 per bushel.

**Corn figured at market price at harvesting plus $0.10 per bushel.

MODEL CONTRACT FOR TABLE EGG PRODUCTION

Development of an equitable table egg contract is of utmost importance for successful contract egg production. A model contract is difficult to prepare as all of the interests of the table egg producer and dealer do not necessarily coincide. The table egg producer is frequently concerned with problems of obtaining money or credit to conduct his business, securing a better market and/or getting technical assistance, while the dealer is interested in obtaining a uniform, high quality product with a minimum fluctuation in supply. This conflict of interest is not insurmountable as each firm is interested in maximizing profits. A contract is considered fair when the income is shared in the same proportion as the value of the contribution of each party in land, labor and capital taking into consideration the risks involved.

Table egg contracts have been developed primarily on a flat fee per dozen eggs produced or a flat fee per hen per week. At the beginning, contracts specified a producer payment of twelve cents per dozen without incentive or penalty clauses. This payment plan has changed over the years and during 1960 the base payment guarantee was usually four cents per dozen with possible bonus payments of two to three cents per dozen.

In developing a model table egg contract, the contribution of grower and dealer must be ascertained. The grower usually furnishes labor and fixed resources plus a few minor production items. The dealer usually furnishes the birds, feed, medicines, services the flock, markets the eggs and provides a few minor items such as egg cases, fillers and flats.

A table egg contract should contain the following provisions:

1. The contract should be for a specific period. The starting date and

termination date should be spelled out. The period of contract may be for a specific time period such as 12 or 15 months or just for the laying period of the hens with a clause specifying that when production drops to a certain percent the birds will be sold.

2. The contract should be definite on renewal provisions. Some contracts call for automatic renewal and others call for automatic termination at the end of the contract period in the absence of advance written notice of renewal or cancellation. The grower should ascertain if he has the same rights as the dealer and if not insist on having them.
3. The contract should contain specific cancellation provisions. It is necessary to have specified what happens in case of death or illness to the grower or dealer; can either party sell or assign the contract to others; what happens in case the birds are destroyed by fire, flood or lightning; can the contract be cancelled in case of unprofitable operation and can it be cancelled for non-compliance by either the dealer or grower? Most contracts contain cancellation provisions for the dealer but few contain provisions whereby a producer can cancel a contract. It is necessary to have mutual protection as a dealer could force the grower's heirs to continue the contract, regardless of conditions, but a dealer could step out of a commitment at any time for any of the reasons stated in the contract.
4. The contract should clearly identify the contracting parties. It should specify who can represent the company, whether both the husband and wife have to sign the contract, and whether the landlord is required to sign.
5. The contract should clearly outline the legal relationship between the

contracting parties. This is important as the dealer (integrator) may be liable for injuries and losses to a third person under certain conditions and the dealer may also be required to make social security contributions for the grower. These and other legal considerations should be clearly defined to prevent any misunderstanding. It is necessary to check with an attorney on legal responsibilities of both contracting parties but generally speaking a dealer is not responsible for the actions of the grower if the grower is considered an independent contractor.

6. The contract should contain provisions as to the supplies furnished by each party. The production items should be listed as to which items will be furnished by each of the contracting parties. The contract should also be explicit regarding what is furnished. For example, some table egg contracts state only that the integrator will supply a certain number of birds. They do not state whether the birds are baby chicks, ten weeks old or ready-to-lay pullets. The contract should also clearly state who pays the insurance on the birds, feed, building(s), and equipment.
7. The contract should be specific as to who owns the manure and feed bags.
8. The contract should contain a provision that states who will make the management decisions. The table egg producer should understand the extent to which the dealer (integrator) can make management decisions. If the dealer controls all management decisions, it is necessary for the producer to acquaint himself with and follow the program as outlined.

9. The contract should be explicit as to producer payments. For contracts that guarantee the producer various payments per dozen based on market quotation at time of marketing, the grower should make certain that a specific quotation on a specific market is given. If prices are reported for several grades or weight classes, the specific one(s) on which the price is to be based should be stated. When egg prices are reported as a range instead of a single price, the grower should make certain whether the top, bottom or mid-point of the reported price range is used as the base price. When the contract calls for bonus payments to the producer, the basis and method of computing the amounts should be written out in a clear and understandable manner.
10. The contract should contain provisions concerning non-conformance. It should be explicitly stated as to what constitutes non-conformance and the penalties provided for both dealer and grower.
11. The contract should contain provisions for arbitration. If the contract is well written and each party understands his rights and duties, disputes will seldom arise. When disputes do occur there should be provisions for settlement outlined in the contract whereby a settlement can be reached without long and costly court procedures.
12. The contract should be as brief and simple as possible. The most lengthy and involved table egg contract that has been used in Georgia contains fourteen pages or approximately 3500 words. The shortest and most simple table egg contract in use in Georgia contains only two pages or approximately 500 words.

Proposed Model Table Egg Contract

Section I

Date and Contracting Parties:

1. This agreement is made this _____day of _____, 19__, by and between _____ hereinafter called the Producer and _____ _____ hereinafter called the Dealer.

Section II

Term of Contract and Location of Property:

1. The Dealer agrees to furnish the Producer _____(No.) ready-to-lay pullets on _____day of _____, 19___. The Producer agrees to house and maintain these birds through their laying period of _____months.
2. The ready-to-lay pullets are to be placed and are to remain until salvaged by the Dealer on the _____ farm, located in or near _____town, _____ county, _____state.
3. It is understood that the Dealer shall retain title to the pullets, feed and medicants furnished to the Producer. All eggs produced are the property of the Dealer and should any be retained for home use, the same will be paid for at a price agreed upon with the field representative.

Section III

Renewal Provisions:

1. This contract may be renewed by mutual consent, in writing, of both parties.

Section IV

Cancellation Provisions:

1. The Dealer retains the right to move, sell, or otherwise dispose of the hens that due to health or improper care are producing less than _____ percent.
2. It is understood that the Dealer will continue the egg laying project, with the exceptions listed in Section IV, Paragraph 1, through the laying period specified in Section II, provided the Producer carries out the conditions of this contract, unless mutually agreeable, so stated in writing, by both parties.
3. The Producer, in case of illness that would prevent him from caring for flock properly, or his heirs, may cancel contract by giving 30 days written notice to the Dealer.
4. It is understood that said contract is null and void upon non-compliance by either party with a 30 day written notice.
5. If any breach of contract is charged by either party, both parties agree to submit the charges to arbitration as outlined in Section IX, Paragraph 1.

Section V

Production Program:

1. In the event of flock disease, the Producer agrees to notify the Dealer immediately. The Dealer agrees to visit the flock immediately upon notification to determine cause of disease and begin necessary treatment. The Dealer shall furnish all medicines and vaccines necessary and the Producer shall furnish all labor for the treatment of the disease condition.

2. The terms of this contract in no way imply or constitute a partnership, joint venture or employer-employee relationship between Dealer and Producer. It is further understood the Producer is acting as and constitutes an independent operation.

Section VI

The Dealer Alone Agrees to do the Following:

1. Supply the following items of production and upon the conditions so specified.

Production Items	Condition(s)
A. _____	_____

2. Deliver the production items enumerated in Section VI, Paragraph 1, to Producer's farm. The Producer or his authorized representative shall inspect and sign for all items delivered.
3. Provide a well trained serviceman, without cost to the grower, whose duty will be to visit the Producer regularly (each week if possible) and assist him in his production program and be on call at all times to assist the Producer.
4. Grant to the Producer full title to feed bags used during production year and full title to litter removed from laying house at the end of a production year.
5. To exercise adequate care in the handling, storing, and transporting of eggs produced under this contract to protect egg quality. Any damage to eggs after leaving Producer's farm shall be deemed chargeable to the Dealer and will be his loss completely.
6. Pick up eggs at the Producer's farm _____times per week.
7. To aid the Producer in securing adequate finance which may be

needed to provide the items specified in Section VII, Paragraph 1, but the Dealer is in no way obligated or responsible for such finance.

Section VII

The Producer Alone Agrees to the Following:

1. The grower agrees to furnish sufficient land, housing of proper design, utilities and equipment necessary for the proper care of the laying flocks. The type house and equipment to be used will be determined by the Dealer. The grower agrees to provide an egg storage room equipped and insulated to maintain a temperature of _____°F. or less and a relative humidity of _____% or more. Egg cleaning and sizing equipment shall be provided by the Producer at the option of the dealer.
2. In addition, the Producer agrees to supply the following items and upon the conditions so specified:

	Production Items	Condition(s)
A.	_____	_____

3. The Producer agrees to accept all management decisions and production practices recommended by the Dealer necessary for the efficient operation of the poultry project for the period of this agreement, without cost to the Producer.
4. The Producer agrees to keep records as outlined by the Dealer which will include daily egg production, mortality and feed conversion.
5. The Producer agrees to provide suitable driveways for delivery of feed and for picking up eggs.

6. The Producer agrees to deliver all eggs produced to the Dealer and should any of them be retained for home use, the same shall be paid for at a price agreed upon with the field representative.
7. The Producer agrees to carry fire and windstorm insurance on the building(s) and equipment used in the egg production project. In addition, the Producer agrees to provide adequate insurance to cover value of laying hens, feed inventoried in said building(s) and other supplies furnished by the Dealer. A loss payable clause covering the items furnished by the Dealer is a part of this agreement.
8. The Producer agrees to use the items furnished by the Dealer for the production of table eggs and for no other purpose.
9. The Producer agrees to allow the Dealer complete right to the Producer's premises for the supervision and control of the egg production project.
10. The Producer agrees not to keep any kind of poultry on premises other than layers included in egg production project.
11. The Producer agrees to attend, if possible, any Producer meetings called by the Dealer to discuss items of mutual interest.
12. The Producer agrees to furnish sufficient labor to load eggs and hens when they are picked up.
13. The Producer agrees to spend sufficient time to properly care for the laying flock.
14. The Producer agrees to attempt to produce clean eggs and to properly clean only the eggs that become dirty. The dirty eggs that have been cleaned are to be packed in separate cases.

Section VIII

Egg payments:

1. The Dealer and Producer mutually agree that the Producer will be compensated by the Dealer according to the following schedule:
   A. Base payment tied to market price.
   B. Bonus payment based on feed efficiency.
   C. Bonus payments based on hen housed production.
   D. Bonus payments based on market quality.
2. It is mutually agreed that the Dealer shall compensate the Producer every 7 days on basis of minimum payment under Paragraph 1 (A); each month on basis of bonus payments earned under Paragraph 1 (D); at the end of 12 months laying period on basis of bonus payments earned under Paragraph 1 (C); at end of contract period on basis of bonus payments earned under Paragraph 1 (B); and part under Paragraph 1 (A).

Section IX

Disputes and Arbitrations:

1. Disagreements between the Dealer and Producer shall be referred to an arbitration board composed of three disinterested parties after giving a weeks notice in writing to the other party. The arbitration board shall be composed of one selected by the Dealer, one selected by the Producer and the third by mutual consent of the two members previously appointed. In the event that the two arbitrators first selected are unable to agree upon a third arbitrator, the county agent domiciled in the county where the laying house is located (Section II, Paragraph 2) shall be requested to

be the third arbitrator. The decision of the arbitration board shall be considered binding by the parties to this contract unless a matter of law or a sum exceeding $_____ is involved. Any cost of arbitration will be borne by the party against whom the arbitration board rules.

2. Regardless of arbitration decisions either party may raise any question at any time regarding the egg laying operation covered by this contract.

Section X

Other Agreements

Section XI

Signatures

_____	_____
Date	Dealer
_____	_____
Date	Producer

Section XII

Notarization

Filing with County Recorder

Section XIII

Attachments

Discussion

Section I

This contract clearly defines the contracting parties.

Section II

This contract applies only where ready-to-lay pullets are placed on

the Producer's premises.

Section III

Renewal of contract is by mutual consent in writing.

Section IV

This contract explicitly defines the cancellation provisions and the rights of both Dealer and Producer regarding same.

Section V

The procedure that will be followed in case of a disease outbreak is outlined. For all practical purposes, the Producer is not functioning independently but, under the law, he may be so considered, in order to exempt joint venture or partnership arrangements.

Section VI

The role of the Dealer is clearly defined. Other provisions may be added or some may be deleted.

Section VII

The role of Producer is clearly defined. Other provisions may be added or some may be deleted.

Section VIII

The payment schedule is outlined in simple form. The egg payment schedules will be discussed later.

Section IX

Arbitration procedures are outlined and so stated that neither the Dealer nor the Producer will have an inherent advantage.

Section X, XI, XII, and XIII

Other agreements may be necessary in certain instances; proper signatures affixed; notarization and attachments may be affixed.

Suggested Payment Plan for Table Egg Contract

The following schedule of payments is only suggested as a basis on which a dealer may proceed to determine an equitable payment plan under his conditions and as a guide for table egg producers to use in deciding whether they feel a certain contract is fair.

In determining the contribution of the producer, the following assumptions will be used:

1. Labor requirements ----- 45 minutes per hen per year.
2. Value of labor --------- $1.00 per hour.
3. Marketable eggs -------- 20 dozen per hen for 12 month period after hens reach 50% production.
4. Housing cost ----------- $1.00 per hen.
5. Equipment cost --------- $0.90 per hen.
6. Interest on investment - 6%
7. Estimated cost of insurance, taxes and other minor items ----------- $0.053 per hen.

The labor cost per hen using the above assumptions would be $0.75 per hen per year with a cost per dozen of $0.0375. Using a 20 year straight line depreciation method, the housing cost would be $0.05 per hen per year or $0.0025 per dozen eggs. The equipment cost, using a 10 year straight line depreciation method, would be $0.09 per hen per year or $0.0045 per dozen. The interest on investment would be $0.057 per hen per year or $0.00285 per dozen. The interest on investment was figured on the average investment over the life of the house and equipment. The cost of insurance, taxes and miscellaneous items amounts to $0.00265 per dozen eggs. The

actual cost per dozen eggs for labor, housing, equipment, interest on investment, insurance, taxes and miscellaneous items amounts to $0.0500 using the assumptions as outlined above.

In determining the contribution of the Dealer the following assumptions will be used, in addition to the ones above that are applicable:

1. Feed required per dozen eggs --------- 4.75 pounds.
2. Price of feed ------- $60.00 per ton.
3. Cost of growing ready-to-lay pullets ------ $1.50 per pullet.
4. Interest on investment ------- 6%.
5. Salvage value of hen, including mortality ------ $0.30.
6. Miscellaneous costs ------- $0.025 per dozen.

The above assumptions cover the cost of delivering feed, interest on feed inventory, cost of supervision, medicines, vaccines and other miscellaneous items. The above assumptions do not include any marketing costs or returns to the dealer for his managerial ability.

Using the above assumptions the dealer would have costs per dozen of $0.1425 for feed, $0.06 for flock depreciation, $0.0027 interest on investment in birds - calculated on average value of hens - and $0.025 for miscellaneous items. The actual cost of inputs, furnished by the dealer for producing a dozen eggs, would be $0.2302. The actual cost for the producer and dealer of producing a dozen eggs, using the above assumptions, is $0.2802.

The payment schedule should be:

1. Tied to the market price of eggs.
2. Based on feed efficiency.
3. Based on hen-housed production.
4. Based on market quality.

By tying the base payment per dozen to market price makes the dealer and egg producer more nearly working partners. The egg producer will be more interested in overall economic conditions and he also feels he is being paid on a more equitable basis. It is necessary to have a minimum payment per dozen, for the producer needs assurance of a certain income as he is giving up the possibility of larger profits for a guaranteed smaller average return. This guaranteed minimum payment per dozen should cover costs of housing, equipment, interest on investment, insurance, taxes and other minor items and at least one-half and preferably two-thirds of the estimated labor costs. The above costs, excluding labor, amounts to $0.0125 per dozen. Labor cost was calculated to be $0.0375 per dozen. A payment plan that would cover cost of housing, equipment, interest on investment, insurance, taxes and other minor items and two-thirds of the labor cost would be $0.0375 per dozen. For a 5,000 size laying flock a minimum payment schedule of $0.0375 per dozen will guarantee a gross return of approximately $300.00 per month to the producer of which $200.00 can be considered returns to labor.

There should be a sliding scale schedule of payments based on market price. A schedule that provides a $0.005 increase per dozen in producer payment for each $0.03 increase in market price of eggs is fair to both parties because of the extra risks the dealer must take and the producer is guaranteed a gross return of $0.0375 per dozen regardless of the price of eggs. Market price should be figured for the entire market period because of the wide price fluctuations that are inherent in the table egg industry and a weighted price should be determined to be fair to both parties. The price quotation should be based on a specific market for a

specific grade of eggs and since the producer does not have any control over strain of birds used and very little control over the date he will be furnished ready-to-lay pullets, the payment schedule for all eggs should be based on the price of large eggs.

There is no payment for dirties, stains, checks or cracks. Since blood and meat spots are not the fault of the producer they are included in the eggs on which payments are made.

Bonus payments and penalties based on feed efficiency are necessary to prevent use of poultry feed for some other purpose and as an incentive for the producer to reduce feed wastage. Since strains vary in size of eggs produced, it would be easier for a producer to earn bonus payments with some strains than others assuming the contract remains the same. To provide a more equitable basis for producer payments based on feed efficiency, it would be necessary to base the payments on feed required per pound of eggs. Since the industry does not market eggs by the pound, this particular method of making producer payments would not be practical. This difference in egg size is one of the major reasons that the entire bonus payment should not be based on feed efficiency. Feed required to produce a dozen eggs should be figured from the time the flock reaches 50% production through the entire laying period to keep the producer striving to prevent feed wastage and to maintain production as high as possible. Different figures can be substituted depending upon the length of laying period.

There is approximately $0.015 saved for each one-half pound reduction in feed required to produce a dozen eggs. This saving should be shared equally by the dealer and producer. This method of calculating

bonus payments based on feed efficiency would add approximately $0.0075 for each one-half pound of feed saved per dozen eggs to the amount received by the producer.

The bonus payments based on hen-housed production is partially for psychological purposes as the producer will strive to maintain production at a high rate if he can actually see stated in the contract where it means more money to him. Feed required per dozen eggs will partially reflect production rate but it is more difficult for the producer to understand this method of calculating producer payments, thus, should not be the only way for the producer to earn a bonus. Bonus payments based on hen-housed production also helps take care of the mortality as the production is figured on the number of hens in the flock at the beginning of the production year.

The producer's bonus payment plan was figured as shown on the suggested payment schedule so that the dealer and producer would derive some benefit from increased production. Each increase in production of 12 eggs reduces the depreciation cost of the pullet by approximately $0.003 per dozen. The feed required to produce an additional 12 eggs after the maintenance requirement is satisfied is approximately 1.8 pounds. The cost of this feed at $0.03 per pound is $0.054. Since other production costs will remain almost the same for dealer and producer, the net difference is approximately $0.05 per dozen more cost to the dealer, not including the bonus payments, for each additional dozen eggs produced per hen.

Assuming the average production of a flock to be 20 dozen eggs on a hen-housed basis and average feed conversion 4.75 pounds of feed per dozen eggs, the producer would earn in bonus payments, according to the

suggested payment schedule, a total of $0.35 per hen for these two categories. This would be broken down into $0.20 bonus per hen on basis of hen-housed production and $0.15 on the basis of feed required to produce a dozen eggs. Should average hen-housed production increase to 22 dozen and feed required per dozen eggs decrease to 4.48 pounds - this change in feed conversion is what one would expect as only 1.8 pounds of feed is required for each additional dozen eggs after the maintenance requirement is met - the total bonus payment would be $0.66 per hen for these categories or an additional $0.31 for the production of two dozen more eggs, plus the $0.10 extra cost to the dealer or a total additional cost to the dealer of $0.41 or $0.2050 per dozen.

Bonus payments based on market quality is helpful in securing a higher quality product. The market quality should be based on percent of eggs that meet a certain Haugh unit standard rather than being based on a particular grade of eggs. The Haugh unit value of U.S.D.A. Grade A eggs varies from 55 to 78. Since several days may elapse from the time the dealer processes the eggs until they are purchased by the consumer, eggs with a Haugh unit value of 55 to 60 will probably be of Grade B quality before they are consumed. An average Haugh unit value of 72 or more is not too difficult for the producer to maintain and will provide the housewife with a Grade A quality egg if properly handled in marketing channels. The average Haugh unit value of eggs should be calculated each month and bonus payments made. This will provide an incentive for the producer to do a better job of maintaining egg quality as he will be striving to earn an extra bonus payment each month. No bonus payment on market quality is made on dirties, stains, checks or cracks. Since blood and

meat spots are not the fault of the producer they should not be considered undergrades when calculating producer bonus payments based on market quality.

According to the suggested payment schedule, if 85% of the eggs have a Haugh unit value of 72 or more the producer does not receive a bonus payment on market quality. If 95% of the eggs have a Haugh unit value of 72 or more the producer receives $0.01 per dozen bonus. Assuming an average production of 20 dozen eggs on a hen-housed basis, this would give the producer a total of $0.20 bonus payment on market quality. It would also provide the dealer with two dozen more top quality eggs which are easily worth $0.10 per dozen more than an egg that will be of Grade B quality when purchased by the consumer. Marketing top quality eggs also enables the dealer to secure and maintain good market outlets.

As was discussed above, bonus payments to the producer are made at different times during the year. This provides an additional incentive to get the producer to do a better job of producing top quality eggs. The base payment, per dozen eggs, on market price is paid each week. Producer payments on market quality are made each month and payments based on hen-housed production are calculated and made after 12 months of lay. The bonus payment based on feed efficiency and the additional bonus (if any) based on market price coincides with disposal of the flock and gives the poultryman some additional income for the time he is cleaning and disinfecting the poultry house preparing for a new flock of pullets.

Table VI

Suggested Schedule of Payments for Model Table Egg Contract

A. Base payment tied to market price - - based on the weighted average price of large eggs for entire laying period. Market and day used to be determined by dealer and grower.

Market Price	Producer Payment
cents per dozen to nearest ½ cent	cents per dozen
less than 32	$0.0375
32 - 34	.0425
35 - 37	.0475
38 - 40	.0525
41 - 43	.0575
more than 43	.0625

B. Bonus payment based on feed efficiency.

Pounds Feed Per Dozen Eggs	Producer Payment
15 month period after 50% production	cents per dozen + or -
less than - 4.00	+ $0.0225
4.00 - 4.49	+ .0150
4.50 - 4.99	+ .0075
5.00 - 5.49	- .0075
5.50 - 5.99	- .0150
6.00 and over	- .0225

Table VI (continued)

Suggested Schedule of Payments for Model Table Egg Contract

C. Bonus payment based on hen-housed production.

Production	Producer Payment
12 month period after 50% production	cents per dozen
216 - 239	$0.005
240 - 263	.010
264 and over	.015

D. Bonus payment based on market quality.

Market Quality*	Producer Payment
Percent with Haugh unit value of 72 & over	cents per dozen + or -
80 - 84.9	- $0.005
85 - 89.9	.000
90 - 94.9	+ .005
95 and over	+ .010

*Market quality calculated each month. No bonus payment based on market quality made for dirties, stains, checks or cracks. Blood and meat spots are not fault of producer, therefore, are not considered undergrades or inedible when calculating producer payments.

APPRAISAL OF INTEGRATION PATTERNS, SUMMARY AND RECOMMENDATIONS

Appraisals

Feed is the most important cost element in producing table eggs. Cost of feed varies considerably due to the difference in methods used in securing it. Farm mixing of feed from the "ground up" will reduce cost of feed to the table egg producer more than any other method cited in this study. This points out that complete integration, where farm feed mixing is one segment, usually makes possible a lower cost of producing eggs than under quasi-integration and non-integration. Feed is also the major cost item in producing started pullets.

The second most important cost item in producing table eggs is flock depreciation per dozen. A ready-to-lay pullet can usually be produced at a lower cost under complete integration, especially when a farm feed mill is one segment, than under quasi-integration or non-integration. Feed cost is usually several dollars per ton lower and the calculated cost of labor, housing, equipment, interest on investment, and utilities is lower by 1/4 to 1/3 cents per bird per week. Any method that lowers the cost of producing a replacement pullet without affecting egg production characteristics will lower flock depreciation cost per dozen.

Items of lesser importance in producing table eggs, such as labor, depreciation on housing and equipment and interest on investment, usually cost less under complete integration than under quasi-integration. The approximate cost of the above items under quasi-integration is $0.05 per

dozen. The average cost of these items under complete integration is approximately $0.0325 per dozen or $0.0175 less than under quasi-integration.

The long range trend in Georgia is toward complete integration rather than quasi-integration although during the next few years there will still be considerable emphasis placed on contract egg farming.

Summary

The table egg industry has expanded rapidly in Georgia and the Southeast since 1954. The cost of producing table eggs has declined due to mass production techniques and improved technology in production and marketing. During a given year, the output of table eggs may fluctuate according to the optimism or pessimism of the table egg producers and financiers concerning egg prices. Except for some seasonal variations, consumer demand for table eggs is rather stable during the year.

The major premise of this study is that integration patterns in procuring inputs and disposing of output have developed in the table egg industry and that this integration is continuing. A formal theory was developed to explain this development of economic integration as prior studies had failed to furnish the proper theoretical framework upon which to evaluate integration.

Two basic integration patterns were discussed: (1) quasi and (2) complete integration. In addition, non-integration was discussed as it was considered the "pure model" in producing table eggs. Quasi-integration refers to arrangements either horizontal, vertical or circular where two or more firms develop working agreements and/or contracts but retain

their separate identity and ownership. Complete integration refers to firms that own several distinct production units in either horizontal, vertical or circular arrangements. Both profit and non-profit organizations can follow these integration patterns, but only profit-type businesses were included in this study.

From a theoretical standpoint, the advantages and disadvantages of economic integration are many and varied. Economic integration may lead to lower production and marketing costs due to internal and external economics of scale. The more segments owned and/or controlled by one firm, the greater the possibility of lowering costs. Firms under monopolistic competition have lowered costs but have been unable to unduly control price.

There is an interesting aspect of integration in its relationship to market structures. Non-integration is consistent with the theory of "pure competition." On the other hand, quasi and complete integration are more representative of monopolistic competition. Complete and quasi-integration may co-exist in the same market and even within the same firm.

From a theoretical standpoint, substantial competition may still be present among and between the various integrated firms. Integration can result in lower costs of production without unduly extending the firm's control over price and society will benefit as productive resources can be more economically and efficiently utilized. Firms may be more progressive and through cost saving techniques produce and market their output at a lower cost. Integration is desirable as it is an efficient way to get job done.

Firms producing table eggs were examined in relation to non-integration, quasi-integration and complete integration. Integration exists at all stages in producing and marketing table eggs. Non-integration exists, but is not widespread. Quasi and complete integration are of considerable importance, but more table eggs in Georgia are produced under complete integration. Feed dealers and manufacturers are typical of firms that have integrated on a contractual and/or agreement basis (quasi-integration) with poultrymen for the production of table eggs. Complete integration has attained its importance, primarily, through expansion of existing firms.

The key link to quasi-integration is table egg producers. Financing is the major factor which serves to convince many table egg producers that quasi-integration is a necessity. The need for large amounts of capital at certain times plus price risks give feed dealers and manufacturers an opportunity to offer credit plans or include the grower in a quasi-integration pattern.

Two main patterns of integration have evolved in producing table eggs with six sub-patterns plus non-integration. Of the six sub-patterns of integration and the one under non-integration only five are of any importance. These are: (1) non-integration, (2) quasi-horizontal integration, (3) quasi-circular integration, (4) complete vertical integration, and (5) complete circular integration.

Many factors are involved in selecting a particular integration pattern in producing table eggs. The dominant consideration may be the producer's financial status or his ability to obtain credit. Another is the alternatives that exist on the farm and in the community. Therefore,

each integration pattern is recommended in the light of possible economic conditions that confront the table egg producer.

Recommendations

Complete circular integration is recommended for the firm that has sufficient capital and know-how to operate a large table egg enterprise. The firm should have a suitable marketing outlet and experienced personnel before investing large sums of money. Input items can be secured at a lower cost because of volume purchases. Feed cost may be reduced $15.00 to $20.00 per ton and the cost of growing a ready-to-lay pullet may be reduced $0.50 to $0.60 when compared with a non-integrated enterprise. Another advantage of complete circular integration is the breaking up of the enterprise into smaller production units. This can be of utmost importance from a poultry health standpoint as isolation is one way to prevent disease spread and disease outbreaks.

Complete vertical integration may allow as much cost reduction as complete circular integration. Usually a firm operating under complete vertical integration is smaller than one operating under complete circular integration, therefore cost reductions may not be of the same magnitude. The same recommendations and precautions as discussed under complete circular integration would be applicable here.

Quasi-integration is recommended for producers whose credit position is weak, when egg prices appear to be entering a depressed period, if their poultry houses and equipment are heavily mortgaged, and if they are new in the business. It gives the producer the security of a guaranteed income, the cost to the producer being the possibility of making a higher

income if he were an independent producer. Quasi-integration should, also, be recommended if the producer lives in an isolated area and would encounter difficulty in procuring inputs and in marketing table eggs. This makes possible the recommendation of contract table egg production in some areas of the state while not in others. The dealer should insert some incentive and penalty clauses in the table egg contracts before he finds that flock management is unsatisfactory and that egg quality is poor.

Non-integration is not recommended to any producer who has sufficient capital and know-how to operate an integrated table egg enterprise.

Kohls and Wiley contribute further to this idea in the following manner:

> "In the long run, total costs, including costs of raw product growing, processing, transportation and marketing, in an industry where integration has taken place, are likely to be lower than where no integration has taken place. This is likely to be so because the integrated operation effects a pooling of talents. The individual grower's risk position may be reduced and management levels may be raised. Total industry capital costs might be reduced where the dealer is the financier since he would have more intimate knowledge of the credit problems of the industry and would be in a position to pool risks. Marketing and processing costs might be reduced because of a closer coordination of supply movement and other factors. This would be especially true if the integrated area, with its potentiality of a greater reserve of capital, could carry the burden of low prices in times of over-supply better than an area of independent growers with limited abilities to absorb such low prices for an appreciable time.
>
> Areas with an integrated industry also are likely to be more stable than non-integrated areas. This would tend to be the case when arrangements between dealers (as marketing agents) and processors causes both to become more interested in a continuing level of supply. The self interest of feed manufacturing firms would also favor stability in the level of

Table VII

Recommended Integration Pattern for Table Egg Producers

A. Producer's Management[1]	Pattern Recommended
Good	Complete, quasi and non-integration
Fair	Quasi-integration
Poor	Quasi-integration
B. Producer's Capital[2]	
"Excess" Capital	Complete or non-integration
"Adequate" Capital	Complete or quasi-integration
"Deficient" in Capital	Quasi-integration
C. Expected Table Egg Prices[3]	
High	Complete or non-integration
Average	Complete or quasi-integration
Low	Quasi-integration

[1]Management is considered good when feed conversion rations are not over 5.0 per dozen eggs, hen-housed production not less than 228 eggs, laying house mortality not over 10%, and checks and cracks not over 3 percent. Fair and poor management would not attain the above levels of efficiency.

[2]"Excess" capital refers to producers who can sustain losses for several months and continue in business; "adequate" refers to producers capable of sustaining losses for only a few weeks; "deficient" capital refers to growers that cannot sustain any losses and remain in business.

[3]"High" refers to $0.40 per dozen and over;

"Average" refers to $0.30 up to $0.40 per dozen;

"Low" refers to less than $0.30 per dozen.

production and such firms may take steps to assist their dealers in times of distress."[1]

A model table egg contract was developed as a guide for dealers and producers to use in planning a contract table egg program. In the past many of the contract table egg programs were not planned properly, thus causing many disagreements, disappointments and a general feeling of antagonism between dealer and producer. A number of provisions that are necessary in a model table egg contract were discussed as to the basis of their overall need and contribution to the contract. A table egg contract must be equitable between the dealer and producer for a pleasant working relationship and long term association. The contribution and risks of the dealer and producer were ascertained in developing an equitable and workable contract. A table egg producer should not expect an equal opportunity to share in greater possible profits in this arrangement as the producer is taking less risk than the dealer and the producer is guaranteed an income.

In addition to developing a model table egg contract, a suggested schedule of payments was presented. This schedule is to be used only as a guide, as different locations and circumstances may make some changes necessary and desirable.

The long range trend in Georgia and the Southeast is for more economic integration in the table egg industry.

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[1]Kohls, R. L. and Wiley, J. W., "Aspects of Multiple-Owner Integration in the Broiler Industry," Journal of Farm Economics, Vol. 37, Feb. 1955, pp. 88-89.

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